THE BUILDER

A Journal for the Architect & Constructor

FEBRUARY 1, 1929 — No. 4487

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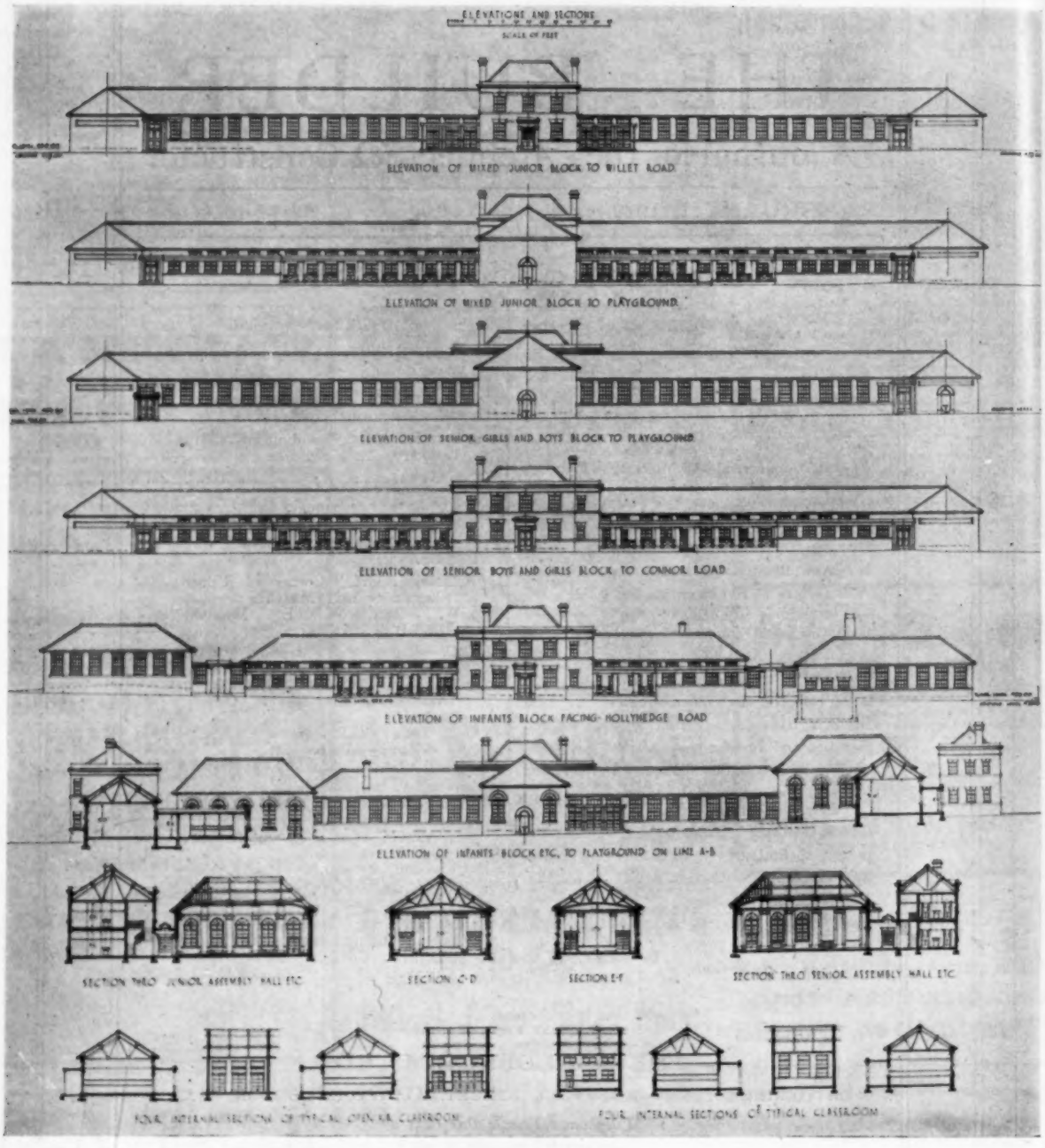
87TH YEAR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Competition for Council School at Charlemont, West Bromwich : First Premiated Design.

Mr. A. O. Chatterley, A.R.I.B.A., Architect. (*See also pages* 246-248.)

THE BUILDER

A JOURNAL FOR THE ARCHITECT AND CONSTRUCTOR

WITH WHICH IS INCORPORATED "THE BRITISH ARCHITECT."

VOL. CXXXVI. No. 4487. FEBRUARY 1, 1929.

INDUSTRIAL STATISTICS, 1928.

AT a time when such acute distress exists in one of the greatest basic industries that an official appeal has been made to private individuals to relieve the sufferers, and when the Government has joined in this movement by offering to place pound for pound to the fund thus raised, it is possible that an unduly gloomy idea may become prevalent as to the industrial conditions of the country as a whole. Moreover, there are those in the country anxious to attribute every defect or evil to the capitalistic system and who see in this localised distress an argument for a change of system, an argument which might have greater force were they prepared to put forward as an alternative a system tried with success in any other country, but which can carry no conviction so long as they point to the only existing example of a socialistic State where industrial conditions throughout the country resemble one single distressed area.

At such a time it is well to look facts in the face and to inquire carefully into the real industrial conditions prevailing in this country, and we think that the industrial statistics for the year 1928 now available will show that there is certainly no reason for panic or to encourage a leap in the dark, but on the contrary that things are not so black as they are painted and that if the nation will only apply itself to put its house in order, to place business before pleasure and to disabuse itself of the idea that the period following a great war is the time to display extravagance, then there is no reason to take a pessimistic view of industrial conditions, or of the system as a whole, and that it is not the system that makes the nation but the nation that makes or mars the system. We think an impartial survey of the statistics will support the views we have here expressed.

In considering the question of unemployment it is too often the custom to consider the figures relating to the number of unemployed, but to disregard those relating to the employed, the reason for this being that while statistics relating to the unemployed are available, the increase year by year of the employable population cannot be easily ascertained. The Committee on Industry and Trade in their "Survey of Industrial Relations" went into this question with reference to the years 1913-1924, and they estimated that between 1913 and 1924 the number of unemployed had increased by 800,000, and in the same period the "employee" population had increased by 900,000. The Committee stated that both estimates were rough, but that they led to the deduction that the number of workpeople in employment in 1924 was fully as great as before the war. If we apply the same method to arrive at existing conditions we find that the number of work people insured who were unemployed on December 31, 1928, according to the "Labour Gazette," was 1,565,000, an increase of 465,000 since 1924 when the figure was 1,100,000, and if the rate of increase of the employee population continued about the same as above, that is, roughly speaking, about 100,000 per annum, it will be seen that it very closely approximates to the increase of the numbers of unemployed in the four years since 1924, and, therefore, taking the population as increased into account, no fewer in numbers are now in actual employment. Moreover, the figures as to unemployment vary considerably in short periods, for on December 19 the number returned as unemployed was not 1,565,000 but 1,127,000, a figure more favourable to the above argument. It is serious enough that employment should not keep pace with the increase of population, but not nearly so grave as would be a failure to employ a population that was stationary or even diminishing.

And here another, but fortunately a temporary, cause for an increase of unemployment amongst an increased population has to be taken into consideration, for the Committee also pointed out that owing to the war practically the whole increase in the number of men employees is found in the older age groups, viz., amongst those whose average productive capacity must be below the maximum, and a change of this magnitude in the age composition of the employed population cannot be without its effect on productive costs and hence on unemployment. When this sad but transitory cause is removed there is certainly reason to hope that employment may again keep pace with the increase in population. These preliminary observations may be of assistance in drawing true conclusions from the figures as to unemployment published in the "Labour Gazette," and they may also serve to show that the industrial position is not so desperate as in some quarters there is an attempt to make out.

In the first place comparison has to be made with the year 1927, a year in which our contemporary states: "The average number of insured persons actually in employment was the highest ever recorded, and the average percentage rate of unemployment among insured persons was lower than in any year since 1920." The average percentages of insured persons unemployed in 1927, including those temporarily stopped was 9.7, and the corresponding figure in 1928 was 10.9. The year began better than 1927, and the increase in unemployment in the second half was rather less than in the corresponding period in 1927. Thus, between July and November there was an increase in the rate of unemployment from 11.6 to 12.2 per cent., whilst in the corresponding period in 1927 the increase was from 9.2 to 10.0 per cent. In numbers this represents 76,000 as compared with 95,700.

The serious feature in connection with unemployment is that the set back experienced between the end of April and the end of June was confined almost entirely to the six industries: coal mining, shipbuilding and ship repairing, the cotton, woollen and worsted and linen textile industries, and the boot and shoe industry. If these six industries were eliminated the mean percentage rate of unemployment for the year 1928 would closely approximate to that of 1927, viz., 8.9 in 1928, 8.4 in 1927. But in these industries, excluding the six industries, the depression in the latter is reflected in the figures for the last part of the year, as the percentage of unemployment is greater in those months than in 1927, from which we draw the deduction that but for the depression in the six industries the mean percentage of unemployment in the other industries would have been less than in the previous year, thus beating the record of any year back to 1920.

It is satisfactory to note, that by the middle of December each of the six industries, with the exception of the boot industry, had shown some improvement as compared with the end of November, but these six industries include some 2,330,640 insured employees, or about one-fifth of the whole industrial population, and depression in these basic industries affect, as we have shown, nearly every other industry, and the revival of their prosperity is one of the most immediate problems to be solved. It is obvious that the grouping of unemployment on a large scale in certain industries confined to particular areas makes the question of relief far more difficult than if the unemployment were spread over the whole country, and hence the necessity of special forms of assistance to the depressed areas. But if the trade of the country as a whole is to be placed upon a sound basis, welfare in the basic industries is an absolute essential. The problem is a very difficult one to solve, and it appears to involve considerations not confined to those depressed industries.

Is the nation, crippled after the war by destruction of capital, shaping a right course towards developing industry on productive lines, or is not money which should be devoted to reproductive work being frittered away on luxuries and amusements? The protected trades enjoy a different scale of wages from the unprotected trades or industries and an artificial standard of living thus exists unwarranted by the reproductive efforts of the nation. Economy and an intention to find reproductive outlets for the capital accumulated seems essential; the nation is by nature not unthrifty, for the statistics as to the investment of savings are satisfactory, but the question is whether a more reproductive use might not be made of the capital.

Some industrial statistics for 1928 are given on page 260 in this issue.

NOTES

The Haig Memorial. AN official notice—issued by the Office of Works—states that the memorial to Earl Haig will take the form of an equestrian statue, and further, that Messrs. A. F. Hardiman, W. MacMillan and Gilbert Ledward are being invited to submit models. The site, as decided upon by the Office of Works and the Westminster City Council, is to be in the centre of Whitehall, opposite the portico of Dover House. The competition is to be judged by a panel of assessors which will include a nominee of the R.I.B.A., the Royal Academy and the Royal Society of British Sculptors. Two points occur to us in connection with the proposal. Firstly, without prejudice to the skill and attainments of the three distinguished sculptors who are to compete, we would ask why the competition has not been thrown open to the sculptors of the whole Empire. The inspiration that a subject such as the designing of a lasting memorial to the "Lost Leader" would afford, could not do other than give an immense impetus to the art of sculpture throughout the Empire. It would certainly be the cause of producing some interesting and novel treatments. Out of this last arises our second criticism. Why should the statue be equestrian? London is full of this stereotyped form of statue and the proposed Haig memorial gives a great opportunity to some sculptor to produce a design that breaks away from the conventional in expressing the depth of the Empire's feeling towards a man who was not only looked upon by the troops as a leader but as a friend and comrade. If it is not too late, and surely it cannot be, we would plead for a reconsideration of the matter that takes these points into serious thought.

Sky-scrapers. IT will be seen from the illustration reproduced from the *New York Times* what enterprise is still being devoted to the erection of very high buildings in America. It is stated that over one hundred and fifty million pounds are to be credited to the erection of skyscrapers in New York during the past year. A glance at our illustration will show that these new buildings cannot be said to add to the architectual values of the city. One would be curious to know at what height the financial gain ceases to make these building nightmares worth while.

American Opinion. A RECENT report by an influential deputation appointed by the City Council of New York to study the question of housing includes the following remarks which have some significance in view of the attempt to have higher buildings in this country than our present restrictions allow:

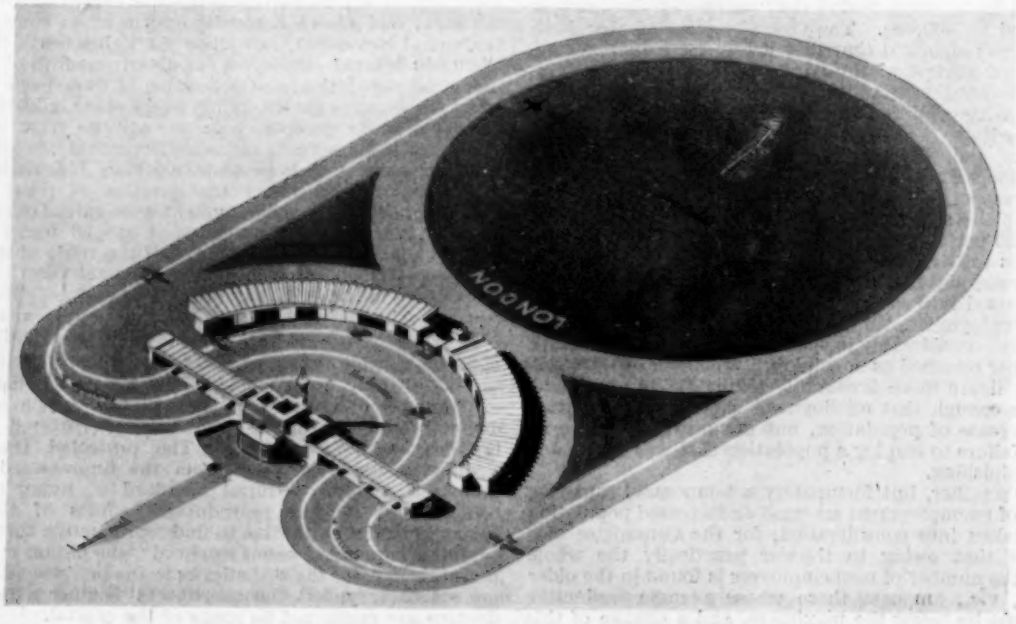
> Buildings are much too high . . . the tendency is to build higher and higher . . . existing public open spaces have become inadequate, hemmed in as they are by cañon walls. . . . The City should ensure an adequate amount of light and air to all dwellings of every character erected in the future—this can best be achieved through regulatory laws. . . . When the Tenement House Law was enacted 25 years ago and it was proposed to change the minimum dimension of the air shaft . . . to 25 ft., it was at once stated that this could not be done, that the change might seriously affect real estate values, and that stagnation in the building industry would result. . . . Such fears have proved quite groundless. . . . In the (subsequent) 25-year period $1,982,000,000 worth of tenements have been built under the operation of such a regulatory statute, and th thing which the building interests said could not be done has been done.

After making various recommendations for the restrictions of buildings to ensure adequate light and air, the report proceeds:—

> Failing to adopt this practical remedy of limiting the height of future buildings . . . we shall undoubtedly be forced to come to the remedy which prevails in England—known as the law of ancient lights. The skyscraper is unknown in England. And yet the great world-city of London, larger even than New York in population, manages to prosper without it, as do all the cities of Europe. . . . It is not too late to save the rest of the City from the serious evils which now prevail in limited parts of Manhattan.

Mr. Percy J. Waldram does a service in calling attention to the above in a letter to *The Times*. We have frequently been advised by capable American architects not to relax our restrictions against very high buildings in this country.

The Aerodrome Designs. THE exhibition of aerodrome headquarters designs at the Institute is an interesting one, for it indicates something of the possibilities which exist in the future development of aerodrome buildings. We confess to some lack of appreciation of the full significance of the plans which do not seem, in the case of the two designs placed first, to have as clear elucidation as one could wish. That these designs indicate very definitely what we may look for in the future, one may very well doubt, and probably for some time the full amount of accessories to the scheme is somewhat exaggerated. Still the competition was well worth while, and the winners deserve much credit for their architectural treatment of the subject.



London Aircraft Terminus Competition: One of Two Designs Placed First.
By MR. D. H. MCMORRAN.

Six Recent New York Skyscrapers.

Riband Development.

A CORRESPONDENT writes: "The announcement made a few days ago by Mr. A. Goddard, the Secretary of the Surveyors' Institution, that his organisation together with the Central Landowners' Association and the Land Agents' Society, are setting up joint committees in each county to help to check 'riband development' along our main roads, has caused a good deal of surprise. It will be remembered that last year a statement was published in *The Builder* regarding the postponement of a deputation organised by the Council for the Preservation of Rural England to the Minister of Health. Owing to a difference of opinion on the part of constituent members, it was thought better not to proceed. It was an open secret that the three Societies which disagreed with the general policy proposed by C.P.R.E., were the Surveyors' Institution, the Central Landowners' Association and the Land Agents' Society. Lord Mayo and Sir George Couthorpe did not quite see eye to eye with the policy suggested whereby public authorities could acquire compulsorily land along our main roads. An effort has been made during the last few months to decide upon an agreed policy, and the committee of C.P.R.E. have been most anxious from the first to meet in every possible way the point of view of land owners and their representatives. It will be lamentable if the representatives of land owners now dissociate themselves with the various bodies connected with C.P.R.E., and adopt an individualistic policy."

Roman York.

NEXT week we hope to give a report of a lecture by Mr. S. N. Miller, M.A., on the excavations carried out at York from 1926-1928, which makes interesting reading. The importance of York (or Eboracum) is that it was from about 71 A.D. the headquarters of one of the three legions quartered in Britain throughout the Roman occupation. It was, perhaps, the most important of the three in that the Commander of this legion was usually the Governor of the Province. The fortress stood on the north bank of the Ouse. Later, a *colonia* or municipality was established on the south side of the river where already there lived the soldiers' wives, traders and others who were not allowed to live within the fortress. The excavations have been carried out each year since 1925 by the York Excavation Committee, whose energetic Secretary, the Rev. Angelo Raine, has raised the money. Mr. S. N. Miller has been the excavator.

Building Collapses at Prague.

JUST as in England, so in Prague, various buildings have recently collapsed. They have caused so much public alarm that the City of Prague has passed special measures in order to try and prevent such calamities occurring in the future. In the future only selected persons with knowledge and experience will be allowed to build; the number of inspectors is to be increased in order that there may be more tests made of materials and work in progress. Even the site is to be geologically tested. The eight-hour day for workmen is to be more rigidly enforced. In large buildings the contractors must always appoint a civil engineer to supervise the work.

Baths for Working Class Houses.

THE problem of providing space for a bathroom in working class houses is giving considerable cause for thought to Local Authorities and to Voluntary Housing Societies. A successful experiment, a correspondent informs us, has been made by an architect who has considerable experience in planning working class houses, especially in colliery areas. He thinks that the ordinary bath, 6 ft. long, is out of place in a working class home, for it takes so much room and is so expensive from the point of view of the supply of hot water. He has installed small baths, 3 ft. 6 inches in diameter and 2 ft. deep, made of cast-iron enamel. There is a folding seat in the bath, and above a shower bath is installed. This is surrounded by a canvas screen, and it is easy to have a shower without making a mess of the room.

Vulgarity.

A GREAT deal has been written lately by those who regard jazz music as foolish and vulgar. They believe that the best way to get rid of it is to allow the public to hear the very greatest and best music in the world. "You will never lift people out of vulgarity by denouncing them," they say. We who are concerned with ugliness in building are thankful that there is some choice left to us to avoid certain music—or vulgarity if we feel that way about it—but the ugly building is difficult to avoid, and it has a long life. Besides there is surely a nice distinction between denouncing people and accusing them of the lack of educated taste! People rarely rally round either negations or criticisms.

The Late Ralph Knott.

THE profession will hear with much regret of the death of Mr. Ralph Knott at the comparatively early age of 50 years. His success at the age of 29 in winning the competition for the London County Council buildings must have given great encouragement to other young architects, for the award was we believe, largely due to the opinion of Norman Shaw, and we may take it that, the fine dignified elevation of the building which is the result of the award is a direct outcome of the influence which has been stressed by the work of Shaw. Knott followed up his County Council success with the Public Offices and Speaker's House of the new Parliament of Northern Ireland, and other works, and it is a matter for real regret that his activities have come to a close when much good work might have been expected from him.

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GENERAL NEWS

Professional Announcement.

Messrs. Menzies, Cockburn and Johnson, civil engineers, architects and surveyors, have removed to chambers at 3, Palmerston-place, Edinburgh.

Mr. J. Stanley Beard, F.R.I.B.A., has taken into partnership Mr. A. Douglas Clare, A.R.I.B.A., and the practice will be carried on under the style of J. Stanley Beard & Clare. We understand that Mr. Clare has been appointed by Messrs. Harrods, Ltd., to supervise the reconstruction of their Basil-street premises.

Professor J. Hubert Worthington, M.A., A.R.I.B.A., Hon. A.R.C.A., has retired from the professorship of the School of Architecture at the Royal College of Art. The position is now filled by Mr. W. G. Newton, M.A., F.R.I.B.A.

Mr. H. Carter Pegg, F.R.I.B.A.

We regret to record the death, on January 19, of Mr. Hallam Carter Pegg, F.R.I.B.A., of 35, Parliament-street, Westminster, and 55, Croham Park-avenue, Croydon.

Architects' Estates.

Mr. William John Wilcox (89), of Hampton Hall, Bathampton, Bath, architect, formerly county surveyor for Somerset, left £50,510 (net personalty, £40,302).

Mr. Walter Hollis Cheadle, of Shrubbery-road, Weston-super-Mare, retired architect and County Surveyor of Staffordshire (net personalty £7,708), left £9,852.

Wrekin College, Wellington: Extensions.

The Governors of Wrekin College have decided to proceed within the next few weeks upon the erection of a new school chapel, the cost of the edifice being estimated at approximately £35,000. The building has been designed in the Perpendicular Gothic style, and will be built of Bath stone, the nave being 75 ft. by 35 ft. and the chancel 28 ft. by 23 ft. The roof will be of the hammer beam type. The architect is Mr. W. D. R. Taggart, Scottish Provident Buildings, Belfast, and the quantities are by Messrs. McCarthy and Lilburn, of Belfast.

Building Industry Council of Inquiry.

We are informed that two members of the Council of the Surveyors' Institution are to represent their profession at the conference, convened by Sir William Mackenzie, K.C., to consider the advisability of setting up a committee of inquiry into costs in the building industry. They are Mr. A. G. Cross, Chartered Surveyor, Chairman of the Quantity Surveyors' Committee, and Mr. Christopher Charter, also a Chartered Surveyor, who is Chairman of the Building Committee. An article on the new Council of Inquiry into the Building Industry was given in our issue for January 18.

Lectures on the Building Crafts.

A course of University Extension lectures dealing with the building crafts will be delivered on Thursdays at 7.30, commencing on February 7, at the Chiswick Polytechnic, South-road, Bedford Park, W.4. The lecturer will be Mr. W. H. Ansell, F.R.I.B.A., and the syllabus is as follows:—(1) Masonry and brickwork: (2) internal woodwork and fitments; (3) plasterwork; (4) leadwork and glazing; (5) ironwork; (6) the present position: the crafts and machinery. Tickets (full course 7s. 6d., single lectures 1s. 6d.) may be obtained from Mr. H. J. Hands, M.A., Town Hall, W.4, or Mr. V. C. Egerton, Principal of the Chiswick Polytechnic.

C.P.R.E. Memorandum on Town Planning.

The Council for the Preservation of Rural England has issued a pamphlet or memorandum on Regional and Town Planning—published for the purpose of explaining briefly and in general terms to what extent and how the objects of the Council can be secured by means of town-planning schemes. It should prove useful to members of local authorities, and of the public generally, who are interested in this method of securing the amenities of their districts by means of controlled and suitable building development and the adequate reservation of agricultural lands and open spaces. It should be remembered that the provisions of the Town Planning Act are applicable not only to the country in the immediate vicinity of towns, where development must inevitably take place, but also to those parts of the country which may be regarded as rural areas in every sense of the term.

Historic Westminster.

A course of lectures is to be given in February and March on "The Story of Westminster." Different aspects of the city will be dealt with. Dr. Jocelyn Perkins, D.C.L., F.S.A., F.R.Hist.S., will lecture on "Its Churches"; Mr. Lawrence E. Tanner, F.S.A., on "Its Schools"; Mr. A. H. Blake, F.R.Hist.S., President of the London Rambling Society, on "Its Highways and Byways"; and Mr. T. Wilson, Deputy-Keeper of Westminster Hall, on "Its Palaces and Houses of Parliament." The lectures have been arranged by the Westminster Housing Association, of which the Duke of Sutherland is President, and Dr. Costley-White, the headmaster, is allowing them to be given at Westminster School. Admission will be by ticket, the price for the course being £1, 12s. 6d., and 6s. 6d. Single tickets can be had for the more expensive seats. Applications for tickets should be made to the Lady Isabel Margesson, 147, Victoria-street, S.W.1, or to the Secretary, Westminster Housing Association, 32, Charing Cross, S.W.1.

"A.A." Year Book.

A firmly established annual, the Architectural Association Year Book, makes its bow for 1929 in a larger and, if possible, even more attractive form than before. For those who are seriously minded there is diary space on paper that is suitably tinted in grey; there is a miscellany of technical data for everyday reference—R.I.B.A. matters, formulæ for the forgetful architect or engineer, and a host of valuable information besides. But for hard-working architects who remember that there is also a time for play, there is set down in full a chronicle of the activities of the "A.A." in all its branches. The school, under the direction of Mr. Howard Robertson as principal, and Mr. Robert Atkinson as director, has again had a very successful year. We learn, as an instance, that three out of the competitors in the Shakespeare Memorial Theatre competition, including Miss Elisabeth Scott, the winner, were connected with the "A.A." The annual excursion, which took place in September, 1928, to Prague, Vienna, and Salzburg (an illustrated account appeared in *The Builder* for October 12), was a great success. The Year Book is obtainable through the Secretary at 34, Bedford-square, W.C.1.

COMPETITION NEWS

Charlemont School, West Bromwich.

The assessor in this competition, Mr. Herbert T. Buckland, F.R.I.B.A., has made his award as follows:—1st (premium £150), Mr. A. O. Chatterley, B.Arch., A.R.I.B.A., 16, Pembroke-road, Bootle, Liverpool; 2nd (premium £100), Mr. Herbert A. Welch, F.R.I.B.A., 7, New Square, Lincoln's Inn, London, W.C.; 3rd (premium £50), Mr. H. T. Wright, F.R.I.B.A., 13, Brunswick-place, Newcastle-upon-Tyne.

Wyggeston Grammar School for Boys, Leicester.

The assessor in this competition, Sir Felix Clay, Bt., F.R.I.B.A., has made his award in this competition as follows:—1st (premium £100), James Miller, A.R.S.A., F.R.I.B.A.; 2nd (premium £75), A. Bailey and D. H. McMorran; 3rd (premium £50), J. Reginald Truelove, A.R.I.B.A.

R.I.B.A. Competition for a Design for an Aerodrome.

It is announced that of the nine designs received in the final of this competition, while no one design is free from certain faults, the jury consider that those submitted by No. 7, Mr. D. H. McMorran, of 34, Butler-avenue, Harrow, No. 8, Mr. M. Hartland Thomas, of 10, John-street, Bristol (R.W.A. School of Architecture, Bristol), and No. 5, Mr. L. C. S. Farmer (The Polytechnic, W.1), give evidence of considerable imagination and original ideas. The jury have been unable to award the first prize of £125 to any one man, but they have decided to divide the first prize equally between Mr. D. H. McMorran and Mr. M. Hartland Thomas, £62 10s. each, and to award the second prize of £25 to Mr. L. C. S. Farmer.

The two prizes were presented to the Council of the R.I.B.A. by the directors of the Gloster Aircraft Company and Messrs. H. H. Martyn and Co., Ltd., to stimulate the imagination and foresight of architectural students, and to assist them to visualise the influence which aerial development must have upon the design of a first-class aerial terminus.

The jury consisted of Sir Sefton Brancker, K.C.B., Mr. C. Cowles-Voysey, F.R.I.B.A., Mr. E. Vincent Harris, F.R.I.B.A., Sir Edwin Lutyens, R.A., Major R. Mayo (consulting engineer, Imperial Airways, Ltd.), Mr. T. S. Tait, F.R.I.B.A., Mr. Maurice E. Webb, V.-P.R.I.B.A., and Mr. G. E. Woods-Humphrey (general manager, Imperial Airways, Ltd.).

The designs will be on exhibition at the R.I.B.A., 9, Conduit-street, W.1, until Saturday, February 9, between the hours of 10 a.m. and 8 p.m. (Saturday, 10 a.m. and 5 p.m.).

Rome Scholarship in Architecture.

The Faculty of Architecture of the British School at Rome, after examining the twenty-six sets of designs submitted in the preliminary competition for the Rome Scholarship of 1929, have decided to admit to the final competition the following candidates:—H. L. Barton, Liverpool University; P. G. Freeman, Liverpool University; H. J. Knowles, Liverpool University; Miss S. Speight, Manchester University; J. R. Tolson, Leeds College of Art; H. A. Townsend, London University; L. Wright, Liverpool University.

The following candidates in the final competition of 1928 were granted exemption from the preliminary competition of 1929 and were admitted direct to the final competition of 1929:—T. M. Ashford, Architectural Association; E. F. Davies, Liverpool University; J. B. Wride, Welsh School of Architecture.

The drawings submitted in the preliminary competition will be exhibited at the Imperial Gallery of Art, Imperial Institute (east entrance), during February 1 to 23.

The result of the final competition will be declared in June. The subject of the preliminary competition was a public school dining hall, and the time allowed was 12 hours *en loge* for the sketch design and five weeks for the finished drawings.

Canberra Cathedral: English Architect's Design Chosen.

The Archbishop of Brisbane, writing in the "Brisbane Church Chronicle," says:—

"A large number of designs have been sent in to the Canberra Committee for the proposed Cathedral at Canberra. The adjudicators, who are three of the leading architects of Australia, selected a very beautiful design by an English architect named Crone, who happened to be visiting Australia for a few weeks and entered for the competition. The proposed Cathedral, when completed in all its details, is to cost £150,000.

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

The Trouble at the Institute.

SIR,—The name of Maurice B. Adams is known not merely to those hundreds whom he calls friends but to thousands of others whom he has never met. Opinion from him on the R.I.B.A. Registration Scheme, or the big back door that it appears about to make in its walls, should carry great weight. Further, he has for many years been an active member of the R.I.B.A. and the Architectural Association, although he now describes himself as "retired."

Another letter, from Mr. Wilde (Associate) deserves attention from quite another standpoint. He is, I should think, a young man, and therefore the "A." will mean that he has passed the Final, and presumably had careful training to lead up to that. He suggests "mass suicide" (professionally) for 50 per cent. of the R.I.B.A. and its allied societies. Evidently he thinks the profession is overcrowded. Has he ever read what a leading article in *The Builder* had to say (April 2, 1926)? It was referring to speeches made by leading architects at an architectural conference or meeting, and to the effect that 80 per cent. of modern building work was executed without plan or supervision of those who called themselves architects. There is evidently a wide field for exploration outside the 20 per cent. that architects are supposed to do. That the profession is overcrowded with the incompetent I have no doubt, but there is ample work for the competent.

Work does not come to a trained man with R.I.B.A. after his name merely because he furnishes an office and sets up a "brass plate." A young doctor or lawyer may buy a share in an existing family practice. They are all alike as peas in a pod, and are mass-produced and perfectly interchangeable. So, when a senior partner retires, a new junior comes in. Not so with the architect, or, more important still, with the client.

Mr. Bacon Monger has an income of £5,000 to £10,000 a year, and desires the biggest and best house he can afford. How does he get it? He is quite likely to turn to the agent who sold the site, or to Mr. Bricks, the builder, nearby. There is nothing to stop that now, and there is nothing in the Institute proposals to stop it in the future, and very likely the Registration Act would recognise the agent as an architect, just as much as Mr. Wilde, who, I infer, has not yet done much work on his own account. Anyway, "Bacon Monger" has been thinking over his house for a long time past. His friends know of the project, his wife's friends also, and any architect among these has made himself known. He may be a beginner or one with a reputation. One thing is certain, "Bacon Monger" will not stroll up the High Street looking for a brass plate indicating an architect within. As he is a man of substantial means, his friends are not likely to include a penniless architect who wants a job. They never meet. A young architect needs, then, not merely ten years' study and £1,000 towards his expenses during that period, over and above his assistant's salary, but when he sets up on his own account he needs funds or influence or associations that will take him among those who have funds to invest in building. The lack of success in many instances is due to unsuitable environment and not to lack of ability. I knew of a case where a young man had lost his mother at his birth, his father during his school-days. He spent his little inherited fortune on a sound training, including some travel abroad. He was then obliged to look forward to a post as assistant, with a prospect (in those days) of £5 a week at the best. He passed the Final and was elected "A." He married, of course. In a few years his job ended; his R.I.B.A. subscription was unpaid, he ceased to be a member, and, just when it was most needed, had nothing even faintly resembling a diploma. Living in a quiet way, how can he possibly meet a rich client or anyone who wants to build? If I attach that story to another, we can see where the Institute fails. "X" was invited to enter a competition. He sent in a really good design. The assessor selected it as best, and "X" received instructions to proceed. The result was a good design spoiled. Yet everything was in order, and "X" became F.R.I.B.A. He was no architect, had no training, and for the competition he procured a "ghost," but did not continue to employ him afterwards. The assessor had to select the best design, not to inquire who made it. The qualification for F.R.I.B.A. is to get work and produce photos and working drawings showing its erection. He is at liberty to employ assistants, and it is hardly for the Institute to discuss artistic merit. It is the duty of a "ghost" to sit down quietly while "Bacon Monger" employs the estate agent. Open the back doors of the Institute and let them all come in. It has been done before and can be done again. "Unification," "Registration," "Professional Discipline and Control," "Institute Coffers Full"—anything but a diploma to distinguish the trained and competent from the others.

. . . . .

I am not a member of the Institute, but as an outsider I have seen it doing things that would have led to my resignation if I had been a member. It changes its point of view too often. Once a learned society, it dropped that to be a professional body. It did much for professional training and attempted to discriminate between the trained, competent man and the others. The others have won. Having a good start as a professional body, it threw open its doors wide to those (near 2,000, I think) who could not comply with its qualification rules for "F." and "A." Its present move for "development" and "registration" is designed to render the distinction between trained and untrained absolutely invisible. The demand for distinction between the trained and untrained is real enough, and, if the R.I.B.A. does not act, assuredly others will.

The Institute was founded for the "Study and Advancement of Civil Architecture." Its membership was no more limited to professional architects than membership of the Astronomical Society was limited to professional astronomers (which I imagine would make it very small). If it would get back to its old status of a learned society, it could award a diploma to those in the professional ranks who were sufficiently well trained, and then drop the meaningless categories and indications of mere membership. Instead of excluding the barrister and clergyman and noble lords, it could bring them back together with newspaper editors, heads of great commercial houses, and perhaps official administrators of our cities. In that way we might get back to architecture for its own sake. Waterloo Bridge took its shape because people then thought in terms of architecture. It was part of every cultured man's education. Waterloo Bridge might have been a mere utilitarian structure to collect the pennies of those who wanted to get from bank to bank.

HORACE R. APPELBEE.

R.I.B.A. London Architectural Medal.

SIR,—In your interesting Note on the R.I.B.A. Medal scheme on page 190 of your issue of January 25, I see a suggestion that selected members of the general public should be invited to assist in the selection. As a matter of fact, specially qualified members of the general public have always formed part of these juries, and the Chairman of the jury from the time of its establishment down to 1928 was the Earl of Crawford and Balcarres. The following is a list of those serving on the present jury, and you will see that the general public are particularly well represented :—

Architects.—Messrs. Walter Tapper, A.R.A. (President R.I.B.A.); H. S. Goodhart-Rendel, F.R.I.B.A. (Chairman, R.I.B.A. Art Standing Committee); Robert Atkinson, F.R.I.B.A.; Charles H. Holden, F.R.I.B.A.; F. Winton Newman, F.R.I.B.A.; Louis de Soissons, O.B.E., F.R.I.B.A.; G. G. Wornum, F.R.I.B.A.

Laymen.—Mr. Charles Aitken, Director of the National Gallery, Millbank; the Very Rev. W. R. Inge, D.D., C.V.O.; Lieut.-Col. Cecil B. Levita, C.B.E., M.V.O. (Chairman of the London County Council); Mr. Charles Marriott, Hon. A.R.I.B.A.

IAN MACALISTER, Secretary.

[**** Our note was, perhaps, not sufficiently clear, but we were referring to the proposal to grant a bronze medal in the Manchester area.—ED.]

Exhibition of Competition Drawings.

SIR,—In an editorial note in *The Builder* of last Friday it was suggested that competition drawings should be publicly exhibited; most young architects will surely support this. Many architects send in drawings with the hope it may lead to business, but a very limited number under present conditions can obtain any benefit, whilst the remainder suffer loss and vexation.

Cannot the R.I.B.A. be persuaded to offer their rooms for the public exhibition of unsuccessful competitors' drawings? Undoubtedly there would be many worth seeing by the public and architects' friends and give a chance of good employment. A small fee might be charged to cover expenses.

FREDK. NESBITT KEMP.

"Local Colour."

SIR,—Your Notes of January 25, under the heading of "Local Colour," discuss a typical result of orthodox economics as they affect building in Aberdeen. The search for cheapness results in the use of brick and concrete in a city and district having a great natural wealth of granite. As you truly state, "It is simply the normal development of economics."

May I add one word to this and re-write: "It is simply the normal development of orthodox or 'sound' economics," and that "the habit *has* developed into a chronic condition"?

The remedy is to be found in a simple reform in economics; credit finance or book figures being a man-made system, the laws of which have been subject to change throughout history, as opposed to the laws of nature which have placed granite in Aberdeenshire and brick earth and clay in the neighbourhood of Peterborough and elsewhere.

ARTHUR WELFORD.

Private Enterprise and State Encroachment.

SIR,—Mr. George Reavell's letter on this subject, which appeared in your issue of January 18, should not be allowed to pass without comment. This matter has been before the Institute several times during the last few years, but for some strange reason it always seems to have been dropped. They have sufficient evidence in their possession to justify some drastic action in this matter, and now that Mr. Reavell has raised the point again it is to be hoped that a definite statement of the policy of the Institute regarding this important question will not long be delayed. It is quite unnecessary to give details on this subject, as the facts are well known to anyone who has come in contact with State and municipal departments. It is to be hoped that Mr. Reavell will be strongly supported in his protest.

X.

ENGLISH COMMERCIAL ARCHITECTURE—IV.

By F. E. BENNETT, A.R.I.B.A.

THE SHOP.

The shop, to have a complete personality, must stand alone as a self-contained structure, expressing itself in plan, section, and elevation like any other building, neither borrowing nor lending in its form more than is necessary for the sake of good manners. Such a condition, however, rarely exists except in the large stores and in the stands (or shops) of a trade exhibition where each exhibiting firm has a self-contained area in which to spread. The regular kind of shop, taking up, as it usually does, a small part of the bulk of a large and prominent building, carries on an existence of two distinct entities, the one of its show exterior on the

THE STYLE OF ARCADING TO THE "GALLERIES LAFAYETTE"- LONDON.

street front, and the other of its selling and stacking space sunk into the depth of the building behind; the former being depended on to perform the function of expressing character and attracting customers. The inside portions of our English shops, while providing much of architectural interest, do not, at present, provide quite so much thrill as the other and more flashy portions—the show exteriors—for it is on these that a great deal more thought and imagination have been expended during recent years.

When we look over the field of recent shop-front work we see the signs of much healthy development. We can have no doubt that ideas about them are rapidly changing, and that a more determined effort is being made to tackle the psychological problem of how to attract the unsuspecting public and make them buy what they did not perhaps intend to buy.

The English tradition in shops, handed over from the Georgian period, still maintains a grip, and blossoms out here and there in such delightful examples as "La Grande Parfumerie" in Regent-street, designed by Messrs. Mewès & Davis; but a stronger influence from abroad is invading the field and overriding our tradition. Following on the precedents of Paris and Berlin a break is being made with all tradition, and new shop fronts of what at first seem to be strangely exotic design are appearing in our best streets. From one point of view it seems that some of these "modern" shops serve the very good purpose of absorbing an overflow of architectural frivolity, but at the same time, to gain an effect of frivolity a design may have to be taken very seriously. The joy of the shop is its ephemeral nature; it flashes for a short space, is a thing of fashion which runs well in the van of the most up-to-date ideas of design, and then fades away behind the shadow of a new fashion. In the light of the ponderous tradition of architectural precedent the fashionable shop front may be a poor thing, but by its little flash of boldness, of bolshevic reaction from the grand architectural manner, it may serve to tickle the intellectual palate and so justify itself.

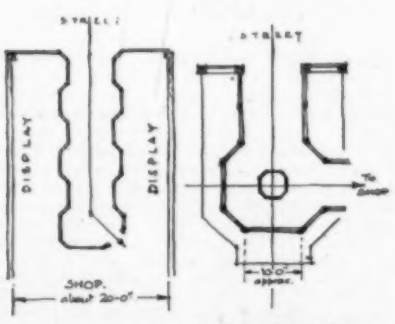
Some successful examples of "modern" (or fashionable) shop fronts rely on a frank treatment of a big opening in a wall and not on a treatment as for a space between two piers. Openings are made long and low in harmony with the going of the street, and they are held in with strong surrounding bands. Appropriate proportion is sought for in preference to the provision of maximum glass areas and means for carrying daylight to the interior.

The finding of a good proportion as between showcase, doorway, and the surround is a matter requiring the most careful judgment, for these elements can do much to express character, idea, or mood. The window of "Madelon Chaumet," formed in a curious "T" shape, will express to many the idea of a precious creation exhibited in state and canopied above with flourishes, and the frontage of the "Paris Trades" shop will express a mood of reserve and fastidiousness. The metal framework incorporated into the frontage of the "Mercie HcHardy"

SHOP IN BERKELEY STREET DESIGNED BY JOSEPH EMBERTON.

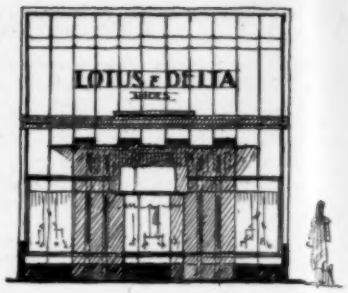
shop reduces the apparent height of the glazing and produces a more intimate character, which is well suited to the particular kind of merchandise displayed. There is an Italian shop in the Via Cavour, Rome, which is typical of a number in that country, where the shop occupies a portion of the ground floor of an old palazzo, and three of the normal semi-circular arches are adapted to form show windows (see sketch). In this case, small niches have been cut into the piers to add interest and provide special display. This type of front, which in no way seeks to dissociate itself from the architecture of the palazzo façade, has considerable quality and charm, and is capable of showing off goods to much advantage. The arcuation of the ground floor of the Wolseley building in Piccadilly contributes considerably to the success of the general design, and the large size of the arches is not inappropriate for the display of large articles placed behind; but the arches of some new shop fronts, where the articles displayed are of a smallish and delicate nature, are too large to look comfortable, and are not really effective, especially when containing a mezzanine in their upper part, which is supported on a lintol running across the springing line.

Arcading is a prominent feature of the recent work, and one that presents endless possibilities. The use of the third dimension as a means of producing interesting shapes has been considerably developed. Fine arcading is by no means new, as we see in some of the older-established shops, such as



THE ARCADED FRONT OF "BERTRAM GILBERTS" IN OXFORD ST. LONDON.

THE ARCADED ENTRANCE TO "LIBERTY'S" REGENT STREET, LONDON.



A SHOE SHOP IN BIRMINGHAM DESIGNED BY JOSEPH EMBERTON.

Waring & Gillow's, of Oxford-street, but its units are being reduced to a much smaller scale.

The fur shop of Bertram Gilbert has, running in from a narrow front, a long and shapely avenue of show windows, which occupies a large portion of the plan and leaves a comparatively small portion over for the shop itself behind. The new arcading of the "Galleries Lafayette," Regent-street, is arranged with a series of criss-cross pathways, leaving diamond- and triangle-shaped spaces between which have very much the effect of flower-beds in an elaborate little garden. The intricacy of its shapes attracts one's curiosity, and the arrangement of its pathways invites one to meander from the pavement into the alley-ways. The ceiling is low, and the subtle grouping of artificial lights gives a feeling of warmth and comfort.

The arcading to the main entrance of Liberty's building in Regent-street constitutes a short avenue leading into a court of windows, with a font-like showcase in the centre, and the entrance to the shop is on one side.

The two new arcades of shops—the "Regent" and the "Quadrant"—are interesting additions to London's shopping district, and in that respect bring London more into line with some of our provincial cities, notably Birmingham, where arcades of liberal proportions have existed for many years. These two arcades suffer a little from lack of daylight, but on this very account the shops in them have been taken up by jewellers and the sellers of other small and valuable articles, who prefer to show off their goods continuously under strong artificial light.

Considering the relative cheapness of electricity, the devices for interesting light effects are still undeveloped in this country. The device of a marquisse or projecting canopy, with many lights on its underside throwing down a rich illumination, has been adopted very successfully abroad. Its adoption here is not easy, because of legal restrictions, but it should be possible to gain a similar effect by slightly recessing the window and treating the soffit which remains above as the underside of a marquisse.

It is desirable that a show window should contain much light within itself and be isolated by a surrounding of darkness. By day or by night a window is made attractive merely by isolation. It may strike a strong note by the vigour of its treatment, or it may hold the eye by extreme reticence, just

A SHOP IN THE VIA CAVOUR, ROME.

as the attention is held by a period of silence in music. The street of shops attacks the eye very much as the noises of an eastern market attack the ear.

While the scope of the designer has been much increased by the abundant supply of new materials available for building shop-fronts, and while metals of many forms and varieties, together with rare marbles and stones from almost anywhere in the world, are to be obtained at a reasonable cost, the dangers to design are increased. The temptation to use fine material for its intrinsic value has not been withstood. One sees cases where fine marbles, rich in grain and splendid for themselves, fail in their object by lack of sufficient contrast with the richness of the articles displayed in the windows.

For excellent choice of material, the shop "Isobel," in Regent-street, still stands as one of the best specimens in the country. A plain surface of deep black marble spreads itself around the windows and isolates the show space from the stonework of the façade above. Acting as a transition from the marble to the opening, a delicately wrought frame of plated steel holds the sheet glass and flashes in fine contrast with the dull texture of the marble, and by its nature as a metal again contrasts with the articles of female apparel displayed in the window. To offset further the brilliance of these articles, the wooden backings of the show-spaces are coloured an unobtrusive green-grey. The design and materials state a function plainly and without clamour, and the complete effect is decisive and cultured.

The use of glass engraved with designs of abstract form, as a material to provide new interest in design, has been much seized upon of late, and particularly by Mr. Joseph Emberton in his design for the "Lotus and Delta" shops. The upper floor of the shop in Birmingham is fronted almost entirely with this material.

"THE BUILDER" DEBATE

XV.—ARCHITECTS AND THE ROYAL ACADEMY.

"That the cause of Art would be better served if the President of the Royal Academy were more frequently an architect."

SIR,—Artists and laymen alike have again and again asked the question, What is Art? As frequently has the answer failed to satisfy, and never has it succeeded in more than touching the fringe of the subject. For it were truly more easy to define the limits of the universe than to draw a line round the indefinable. All we know is that it is something all-pervading that manifests itself in many, and sometimes unexpected, directions.

We know that it is more often involved with the approach to the truth, appealing directly to the intellect, and that sometimes it descends to delight only our senses in lighter vein. Sometimes it is sought diligently before it appears; and sometimes it arrives almost unbidden on the wings of inspiration. Sometimes it is seen and unrecognised; and sometimes the charlatan deludes the fools with the image of affectation. All the arts share this confusion between the true and the false; and the one we must treasure most is the one that comes nearest to our understanding.

What has all this to do with the election of a President of the Royal Academy? Quite a lot, I think. The Royal Academy stands for, or should stand for, the hub of the art of a nation; and its President should be the most understanding and catholic-minded artist of his day. He must have his vision of the truth; understand the ways by which the artists of his time are awakening the minds of the people; and suffer them at times to delight our senses.

Now I regard the Academy as it is to-day as the product and relic of Victorianism. With all its dulness, the art of the Victorians was the narrowest in vision of all ages, for it concerned itself almost entirely with the delight of the senses—perhaps a startling proposition to us, whose senses revolt against Victorian art, but I believe a true reflection. Let me take an example from our own building art by way of illustration. Gothic architecture is a delight of graceful shapes, romantic skyline, and rich ornament. At its best it delights the senses of all but the dullest of us. But to those who have learned to trace the ways by which it came into being, who can see the real part which each unit plays, it becomes something more than this—a symphony that plays alike to heart and head. To all but the few, appreciation of the Gothic was no more than a sensation among those who revived it senselessly in the last century, seeing only the outward form, and understanding little of the inward meaning. I am thinking not so much of the masters of the Gothic Revival as of the numbers of senseless followers who filled our towns with public buildings and banks in the "Gothic manner" that was no manner at all.

I am of the opinion that for many years the Royal Academy has concerned itself only with the art that aims to delight the senses, worthy enough so long as it remains the part of the whole, but doomed when it stands alone. It is true that there have been in the latest exhibitions a few paintings that tend towards what is known as the "advanced school," but one has a vague impression that they are there more for the sensation mongers to crowd round than for the people to learn from.

How is this state of affairs to be altered, and how are we to restore the Royal Academy to its rightful place in the van? I suggest that if we seek its President from the art least likely to suffer deception we are more likely to achieve our object.

I further suggest that architecture is the art most likely to fulfil the requirement, because it is of all the most real. The painter's canvas and pigments are real enough, but what he paints in an effort to avoid photography may be no more than a distortion, and may be nonsense. But what the architect builds can never be nonsense, because it is a fact. No amount of meaningless ornament or false expression can make a building that stands secure anything but a structural fact, and for that reason alone the architect is more likely to approach art from all its aspects with sense and understanding.

It may seem strange that I should have chosen an architectural illustration to show the insufficiency of Victorian art, but even here the building of the Gothic Revival is less likely to deceive than the arts that were practised alongside it. With all conviction I call for an architect to be the next President of the Royal Academy.

POSITIVE.

Ebenezer Howard International Memorial Committee.

An International Committee has been formed to establish a memorial to Sir Ebenezer Howard, the pioneer of the Garden City movement and the founder of Letchworth and Welwyn Garden Cities, who passed away on May 1, 1928.

It has been decided to raise a Howard Memorial Fund to be used:—

(1) To perpetuate Sir Ebenezer Howard's name by the erection of tablets in the Garden Cities of Letchworth and Welwyn, which he founded, and in London, which was his birthplace.

(2) To undertake study and research relating to the principles which should govern the location and distribution of population and industry, including their bearing on regional planning, good housing and city design; and to provide for spreading throughout the world the information or results obtained, by means of books, scholarships, lectures, or other means.

After providing for the first object, the fund will be divided into two sections:—(a) British, and (b) International. Subscribers should indicate to which section of the fund, British or International (or both), they desire their subscriptions to be allocated. If this is not done, the subscription will be allocated as the committee think fit.

Subscriptions should be sent to Mr. Cecil Harmsworth, 13, Hyde Park-gardens, London, W.2.

MEETINGS

FRIDAY, *February* 1.

District Surveyors' Association. Dinner. Hotel Victoria, W.C.2. 7 p.m

Northern Architectural Association. Annual Dinner. At Newcastle-upon-Tyne.

Royal Sanitary Institute. Discussion on "The Civilian Population and Chemical Warfare," to be opened by Mr. F. R. Humphreys. 5 p.m.

MONDAY, *February* 4.

Society of Engineers. Mr. A. Kirkwood Dodds on "Berwick Bridges," Burlington House. W.1. 6 p.m.

Surveyors' Institution. Mr. H. J. Vaughan on "The Significance of the Timber Merchant in Estate Forestry." 8 p.m.

University of London. Mr. F. E. Drury on "Steel and Reinforced Concrete Construction." 6.30 p.m.

TUESDAY, *February* 5.

Timber Trade Technical Education Committee. Dr. S. E. Chandler on "Empire Timbers." London Chamber of Commerce, 1, Oxford-court, E.C.4. 6.30 p.m.

University of London Lectures. Miss E. Jeffries on "Historical Factors of the Problem of London Traffic." 8.15 p.m.

WEDNESDAY, *February* 6.

L.C.C. Central School of Arts and Crafts. Sir Banister Fletcher on "English Renaissance (1500-1900): Famous Elizabethan Mansions." 6 p.m.

Royal Society of Arts. Sir J. Alfred Ewing on "The Vibrations of Railway Bridges: An Example of Co-operative Research."

Incorporated Institute of British Decorators. Mr. H. Warren Wilson on "The Craft of the Letterer." 8 p.m.

Edinburgh Architectural Association. Professor C. H. Reilly on "New Delhi." 8 p.m.

THURSDAY, *February* 7.

National Association of Shopfitters. Annual Dinner. Frascati's, W.1. 7 p.m.

Carpenters' Hall Lectures. Lord Bishop of Durham on "Durham Castle." 8 p.m.

Chiswick Polytechnic. Mr. W. H. Ansell on "Building Crafts: masonry and brickwork." 7.30 p.m.

Institution of Electrical Engineers. Annual Dinner. Hotel Cecil, Strand, W.C. 7.30 p.m.

South Wales Institute of Architects. Central (Cardiff) Branch. Capt. W. T. Creswell on "Conduct of an Arbitration." At 5, High-street. 5 p.m.

West Yorkshire Society of Architects. Mr. H. V. Lanchester on "Town Planning." 62, Woodhouse-lane, Leeds. 7 p.m.

FRIDAY, *February* 8.

Town Planning Institute. Col. C. H. Bressey on "The Economic Aspects of Delay and Congestion on Roads." Caxton Hall, S.W.1. 6 p.m.

Proposed Film Studio, Wembley.

A large studio for the production of talking pictures is to be built in Wembley Park by the British Talking Pictures, Ltd., of London Wall, E.C.2. Contracts will be placed in the near future.

ILLUSTRATIONS

PLATES

Berkeley Court, W.

The site at the corner of Upper Baker-street and Marylebone-road is now being developed by the owner, Mr. Martin W. Harvey, of 124, Baker-street, W., by the erection of a building comprising shops on the ground floor with basements, and eight floors of flats above, making a total of ten floors, each floor approximately an acre in extent. The structure generally is of the steel-framed type, in brick, with Portland stone dressings. The flats are approached from a new road to be constructed, and entered through a large patio. Each flat is being equipped with all modern conveniences and appliances, more especially those of an electrical nature. The flats will be "central heated," and in addition there will be electrical heating, a constant supply of hot water, refrigerators, vacuum cleaning, postal service, and many other refinements.

The flats will vary in size from six bedrooms, three reception-rooms, three bathrooms, three lavatories, kitchen, pantry, etc., to two reception rooms, three bedrooms, two bathrooms, two lavatories, kitchen, pantry, etc. Each flat has its front door off the main staircase or hall, together with a back or tradesmen's door, in each case supplied by an efficient lift service. The principal lifts and staircase are carried up to the roof, on which there will be a roof-garden, nearly an acre in extent, overlooking Regent's Park and the surrounding district. The whole has been planned and designed by Mr. Harvey and his staff (the principal of which is Mr. W. E. Masters, A.R.I.B.A.), and will be carried out by direct labour and sub-contracts under the former's personal supervision. The steelwork is being carried out by the Aston Construction Company, Ltd. All the stonework is being done by the United Stone Firms (1926), Ltd., Bristol. All bricks and cement are being supplied by J. A. Pratt and Co. (1928), Ltd., Watford, and all stoves and sanitary fittings by Fred Hodge, Ltd., Holloway-road, London. Artesian wells have been sunk by Le Grand, Sutcliff and Gell, Ltd. Demolition and excavation are in the hands of Greenham, Ltd. We are informed that many of the shops are already let, and it is hoped to give occupation about midsummer next.

L.C.C. Weights and Measures Office.

The provision of a new Weights and Measures Office in Endsleigh-gardens became necessary to replace the Weights and Measures Office in Rosebery-avenue, which was erected in 1892-3, and subsequently extended, but has since become unsuited to modern requirements—a condition intensified by vibration caused by traffic in the position concerned, which caused serious interference with the accuracy of testing work. The site selected for a new building to replace this is well located and particularly suited to the requirements in the sense that it admits of approaches from both Euston-road, on the north side, and Endsleigh-gardens on the south, making it conveniently accessible for through traffic to the twin weighbridge, centrally placed in the internal courtyard. Unloading platforms are provided on the ground floor, abutting the yard, for the delivery and testing of glass and other measures, etc., with a goods lift connecting the basement, first and second floors. An exhibition room, glass unpacking and general testing rooms, records and inspectors' rooms, garages and an office containing steelyard apparatus in connection with the weighbridge, are placed upon the ground floor. On the floor above is accommodation for glass measure stamping and measure testing rooms, etc., and the local taxation officer, with separate public entrance from Endsleigh-gardens; and on the second floor are a mess-room, store, and residential flat for the caretaker.

The walls generally are built with Fletton bricks, faced externally on the street fronts and upper part of the courtyard with multi-coloured red bricks with a tendency to grey tones in harmony with the colour treatment of the adjacent Society of Friends' building—to accord with the general character of which has been a definite aim in the treatment of the Council's building. The plinth and cornices of the road facades and other dressings are of Portland stone, and the windows generally are steel casements. The lower story of the courtyard is faced with blue Staffordshire bricks, and steel supports and girders are left exposed. The walls of the workshops, internally, are left in fair-face brickwork distempered. A carved stone panel on each of the street fronts embodies the Council's Arms, heraldically coloured—the work of Mr. S. Nicholson Babb, F.R.B.S.

The new building is heated by low pressure hot-water radiators, from a heating chamber provided in the basement. The electric lighting and electric lift were installed under the direction of the Chief Engineer to the Council, Sir George Humphreys, special equipment to fulfil the purpose of the building being carried out under the advice of the Chief Officer of the Council's Public Control Department, Mr. A. G. Chamings.

The general contractors were Messrs. Allen Fairhead and Sons, Ltd., of Enfield, Middlesex, whose tender price amounted to £23,500. The various sub-contractors included:—Messrs. Dorman Long & Co., Ltd., steelwork; Griffiths, Son and Cromwell, heating; James and Co., Ltd., steel casements; The Limmer and Trinidad Lake Asphalte Co., Ltd., asphalting; Adamsez, Ltd., and T. H. Harris and Co., sanitary fittings; Henry Hope and Sons, Ltd., rainwater heads; Archibald Kenrick and Sons, Ltd., ironmongery; Albany Forge, Wainwright and Waring, Ltd., bronze gates, etc.; Bysouth and Sons, stonework; Henry Pooley and Sons, Ltd., weighbridge: (supplies under the direction of the Chief Officer of Supplies); S. W. Francis & Co., Ltd., roller shutters; Martin Van Straaten and Co., wall tiling; Jos. F. Ebner, wood block flooring; Alpha Manufacturing and Electrical Co., Ltd., electric lighting; Holt and Willetts, electric lift.

The building was designed in the Department of Mr. G. Topham Forrest, F.R.I.B.A., F.R.S.E., F.G.S., the architect to the London County Council, and carried out under his direction.

Charlemont School, West Bromwich.

The assessor's award in this competition is given under Competition News, and we illustrate this week the first and second premiated designs, by Mr. A. O. Chatterley, A.R.I.B.A., and Mr. Herbert A. Welch, F.R.I.B.A., respectively.

London Aircraft Terminus.

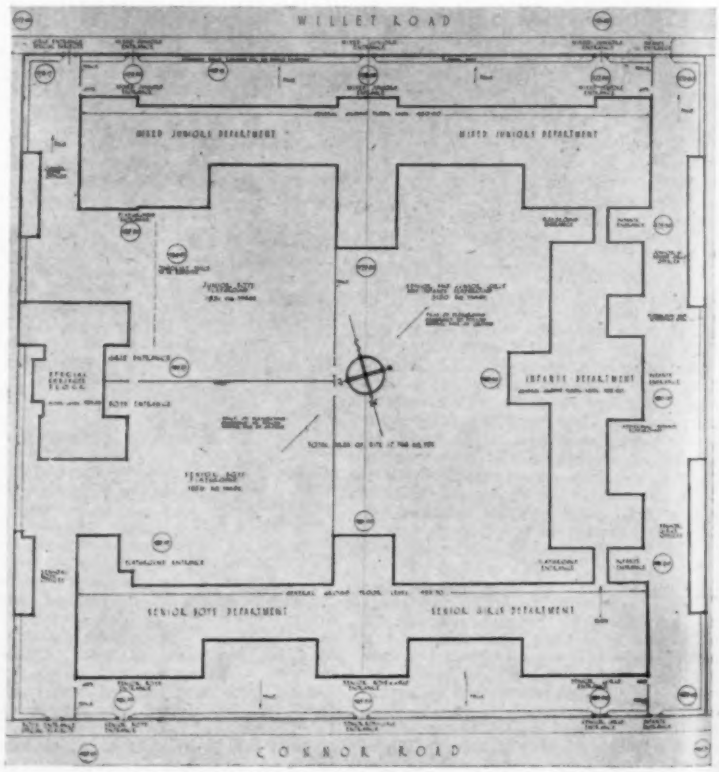
The award of the jury in this competition is given under Competition News. The two designs placed first are illustrated this week.

Weston-super-Mare Pavilion.

In connection with this work, illustrated in our issue for January 4, we are informed that Mr. Gower Pimm, A.M.Inst.C.E., of Bristol, not only acted as consulting engineer, but was also responsible for the whole of the reinforced-concrete details, including foundations, columns, walls, floors and roofs.

Mental Defectives' Institution, Dawlish.

The Plymouth City Council has provisionally approved the terms of a draft agreement between the Western Counties Institution at Starcross and the Devon, Dorset and Somerset County Councils, and the Exeter and Plymouth City Councils. The agreement provides that the Institution will erect at Langdon Farm, near Dawlish, a building to provide for the accommodation of 505 mental defectives, and carry out certain subsidiary works designed for the ultimate accommodation of 800 mental defectives. The buildings are to be erected under the direction of a building committee consisting of ten members, three of whom will be appointed by the Institution, two each by Devon County and Plymouth, and one each by Dorset, Somerset and Exeter.



Competition for Council School at Charlemont, West Bromwich: First Premiated Design,

MR. A. O. CHATTERLEY, A.R.I.B.A., Architect.

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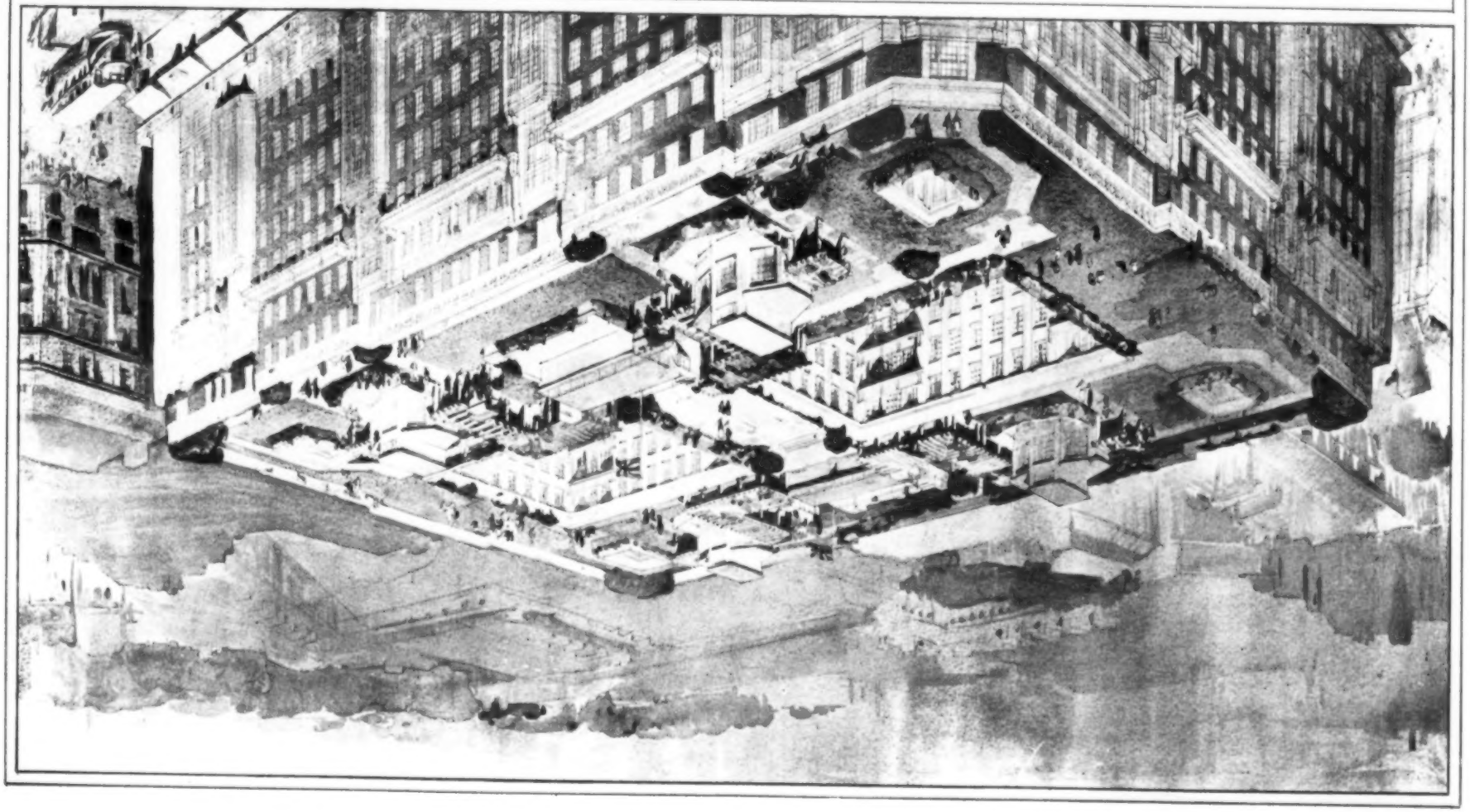

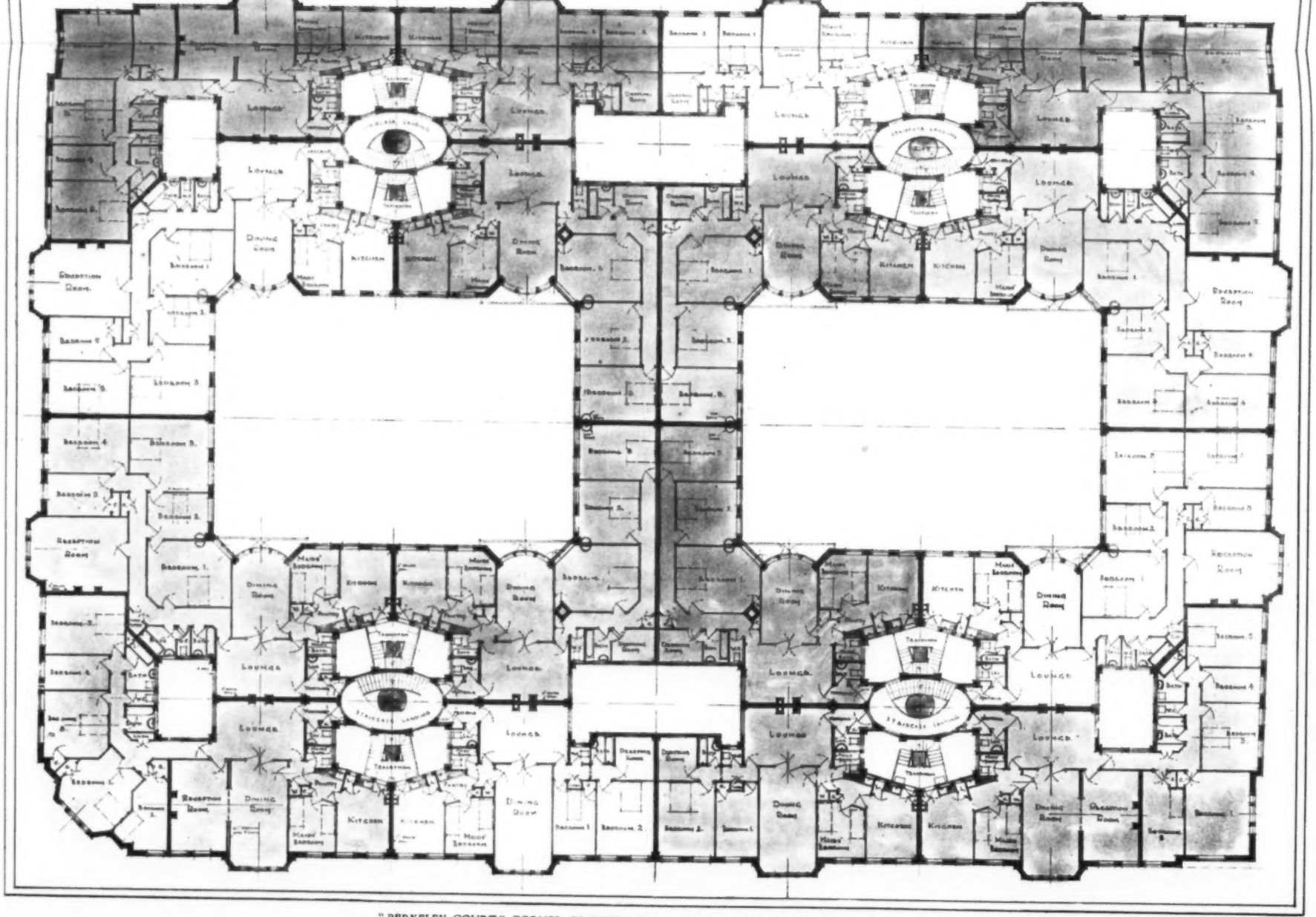

"BERKELEY COURT," CORNER OF UPPER BAKER STREET AND MARYLEBONE ROAD, W.

Mr. W. E. Masters, A.R.I.B.A., Architect.

LIBRARY
OF THE

L.C.C. Weights and Measures Office, Endsleigh Gardens, N.W.: Detail of Entrance.

Mr. G. Topham Forrest, F.R.I.B.A., Architect to the London County Council.

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L.C.C. Weights and Measures Office, Endsleigh Gardens, N.W.

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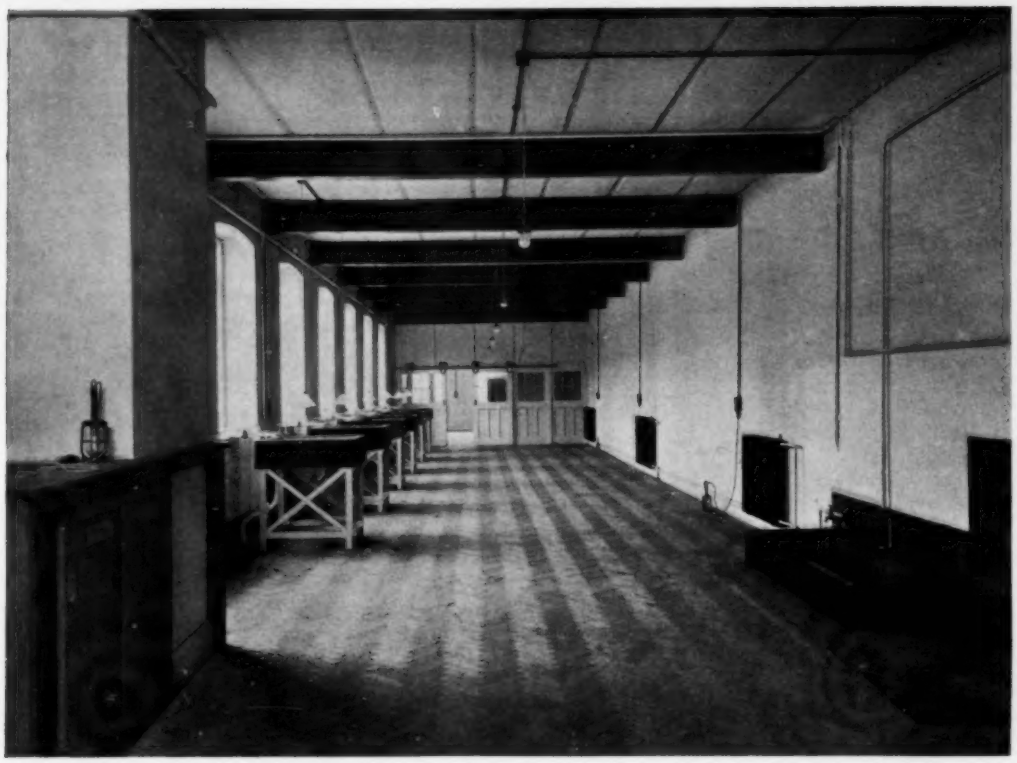
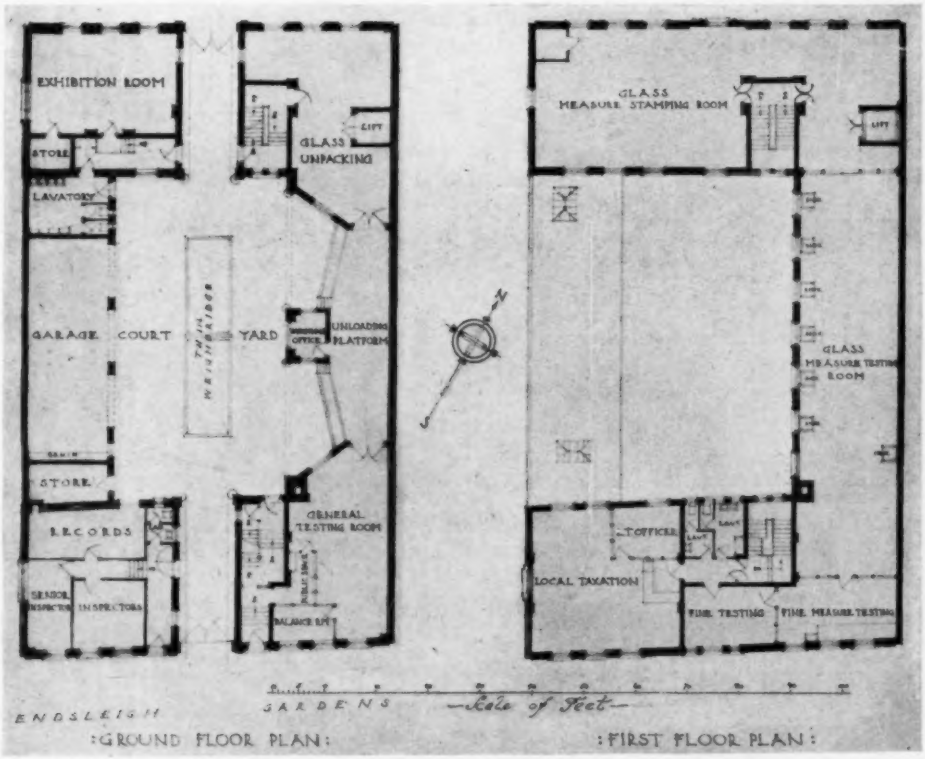
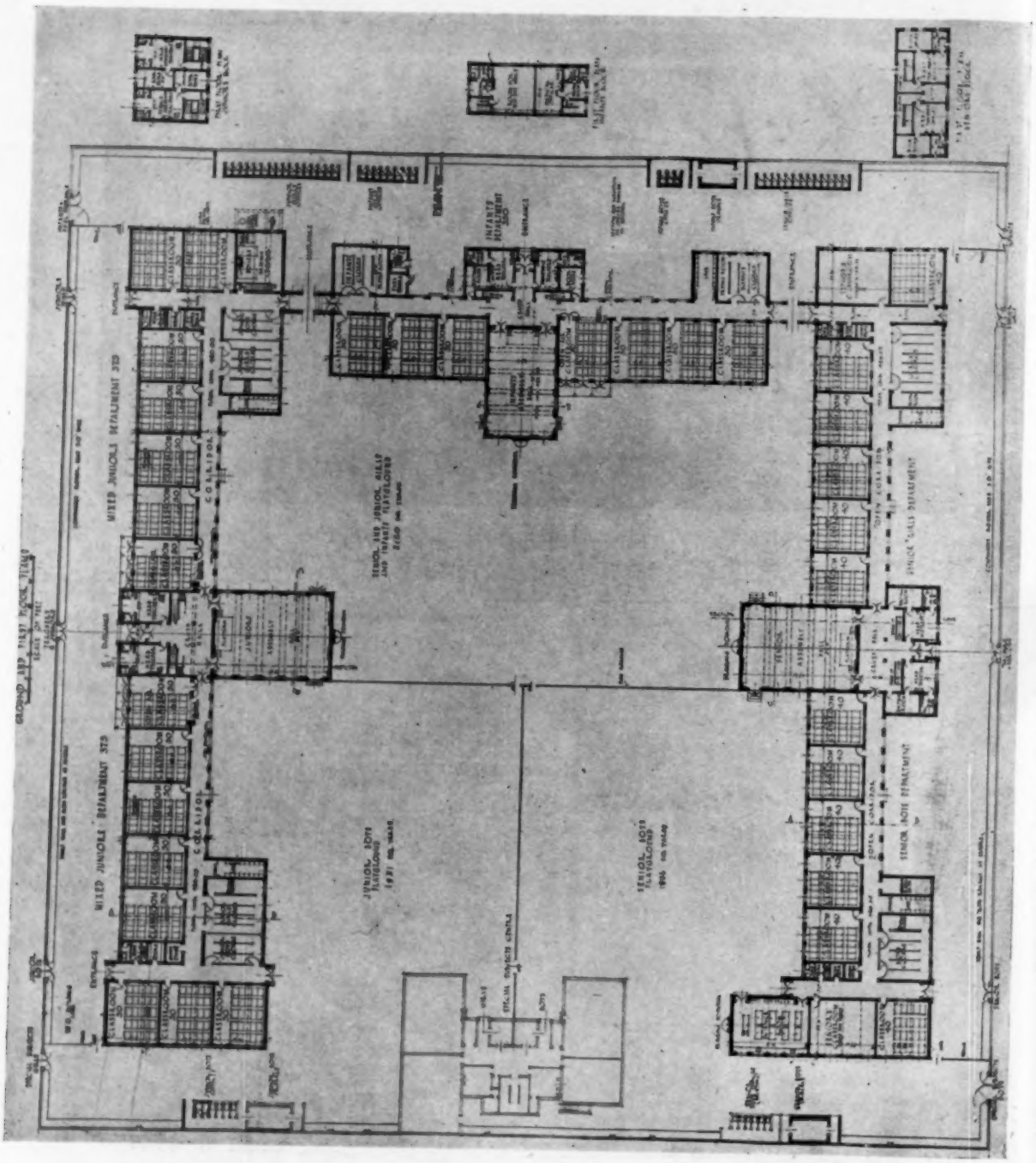


GLASS MEASURE TESTING ROOM.

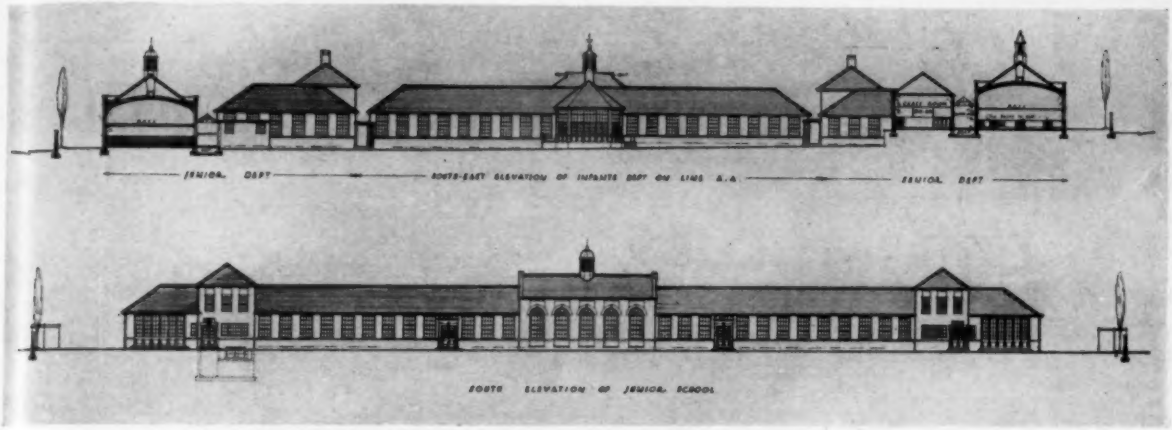


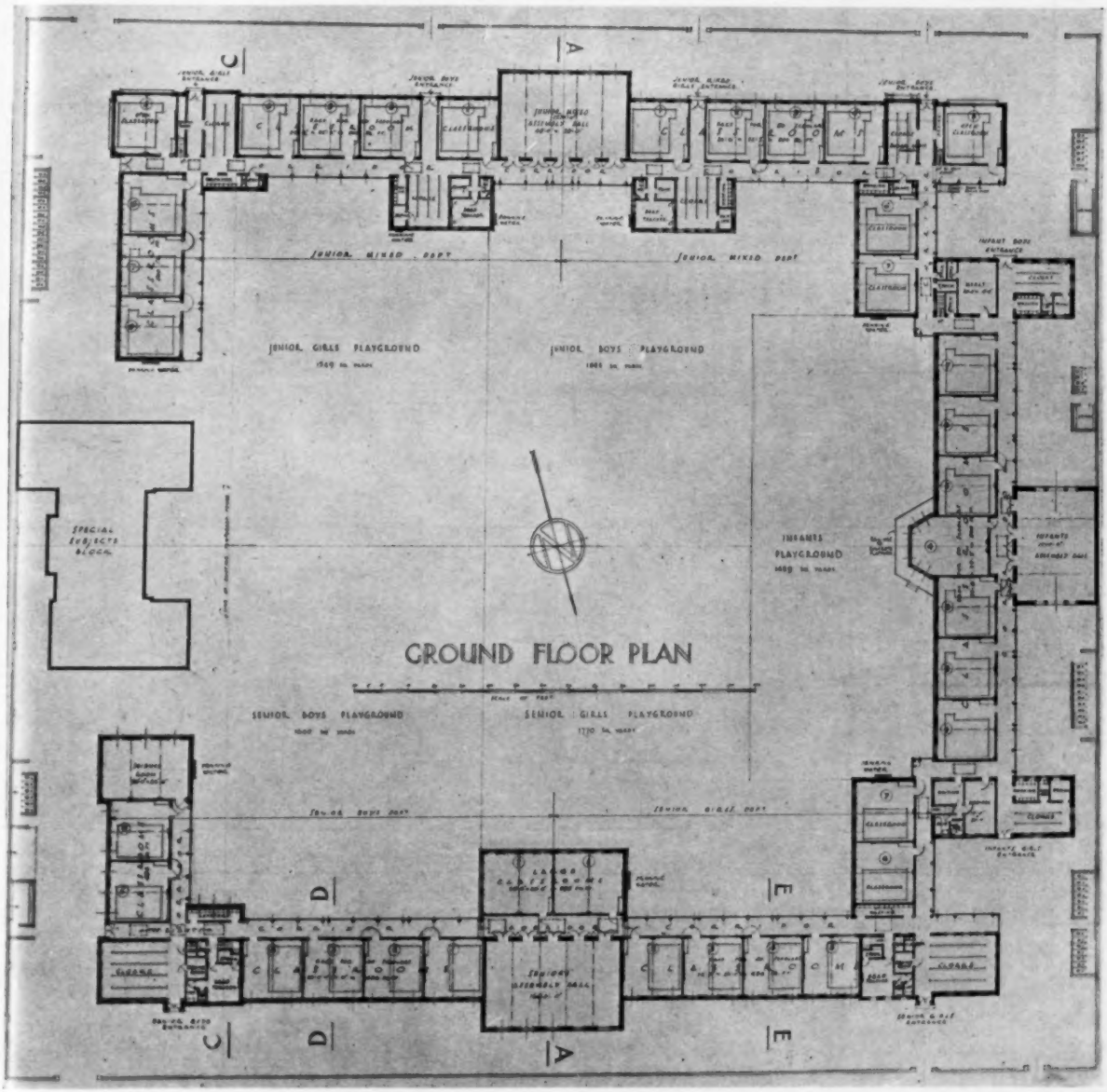
L.C.C. Weights and Measures Office, Endsleigh Gardens, N.W.

MR. G. TOPHAM FORREST, F.R.I.B.A., Architect to the London County Council.



Competition for Council School at Charlemont, West Bromwich: First Premiated Design.
Mr. A. O. Chatterley, A.R.I.B.A., Architect.

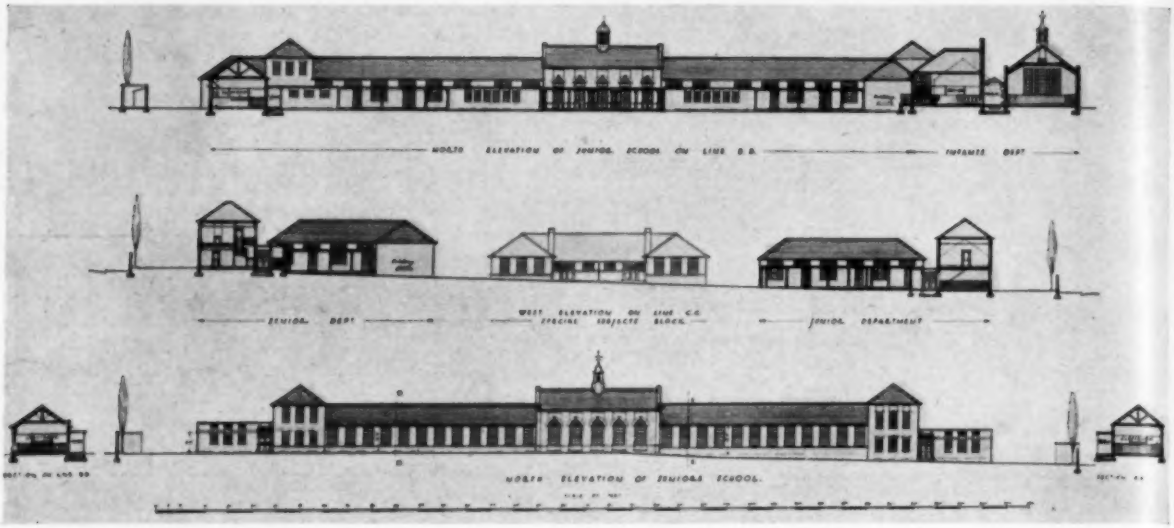


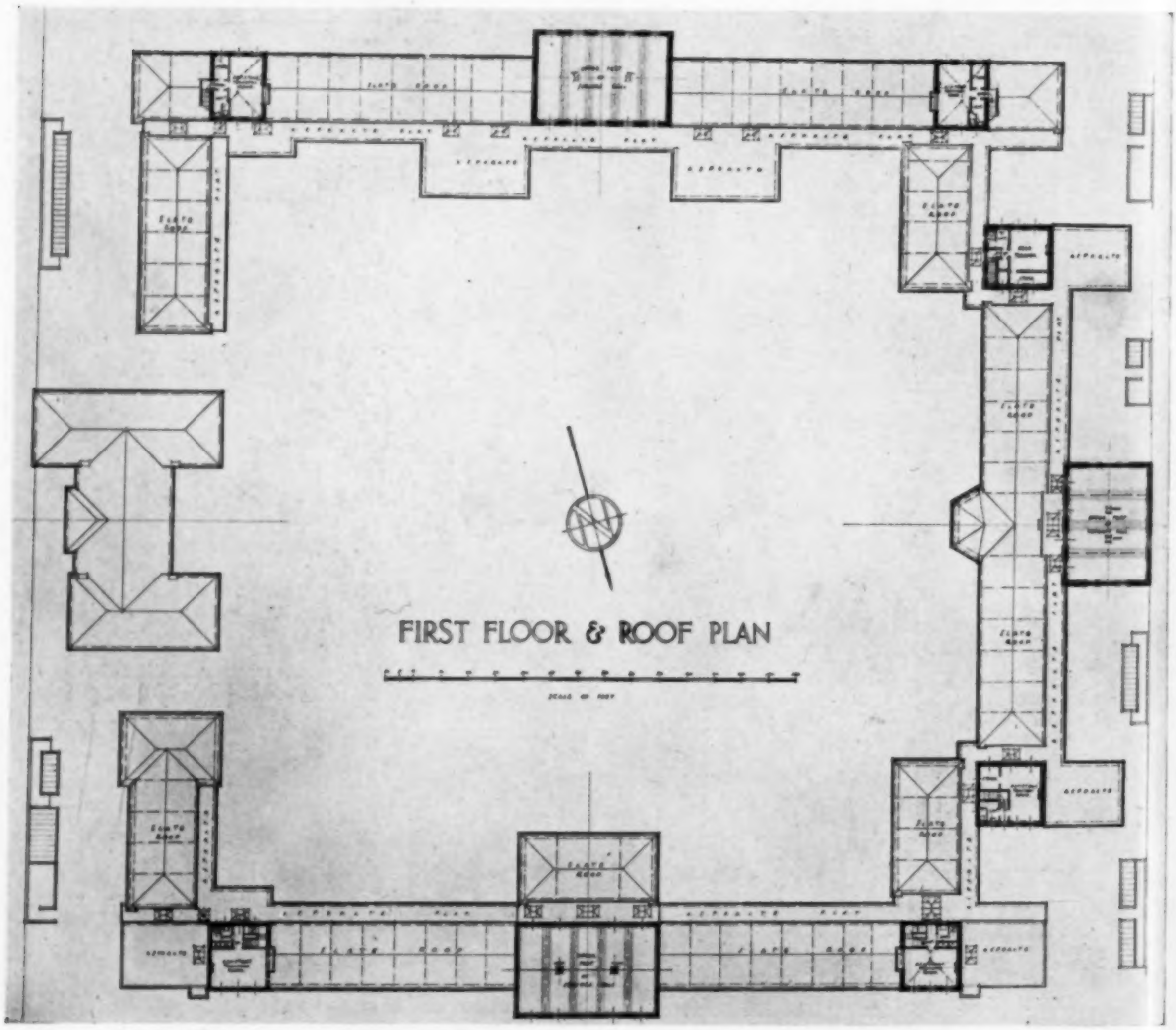


Competition for Council School at Charlemont, West Bromwich: Second Premiated Design.

By MR. HERBERT A. WELCH, F.R.I.B.A.

Competition for Council School at Charlemont, West Bromwich: First Premiated Design.
MR. A. O. CHATTERLEY, A.R.I.B.A., Architect.





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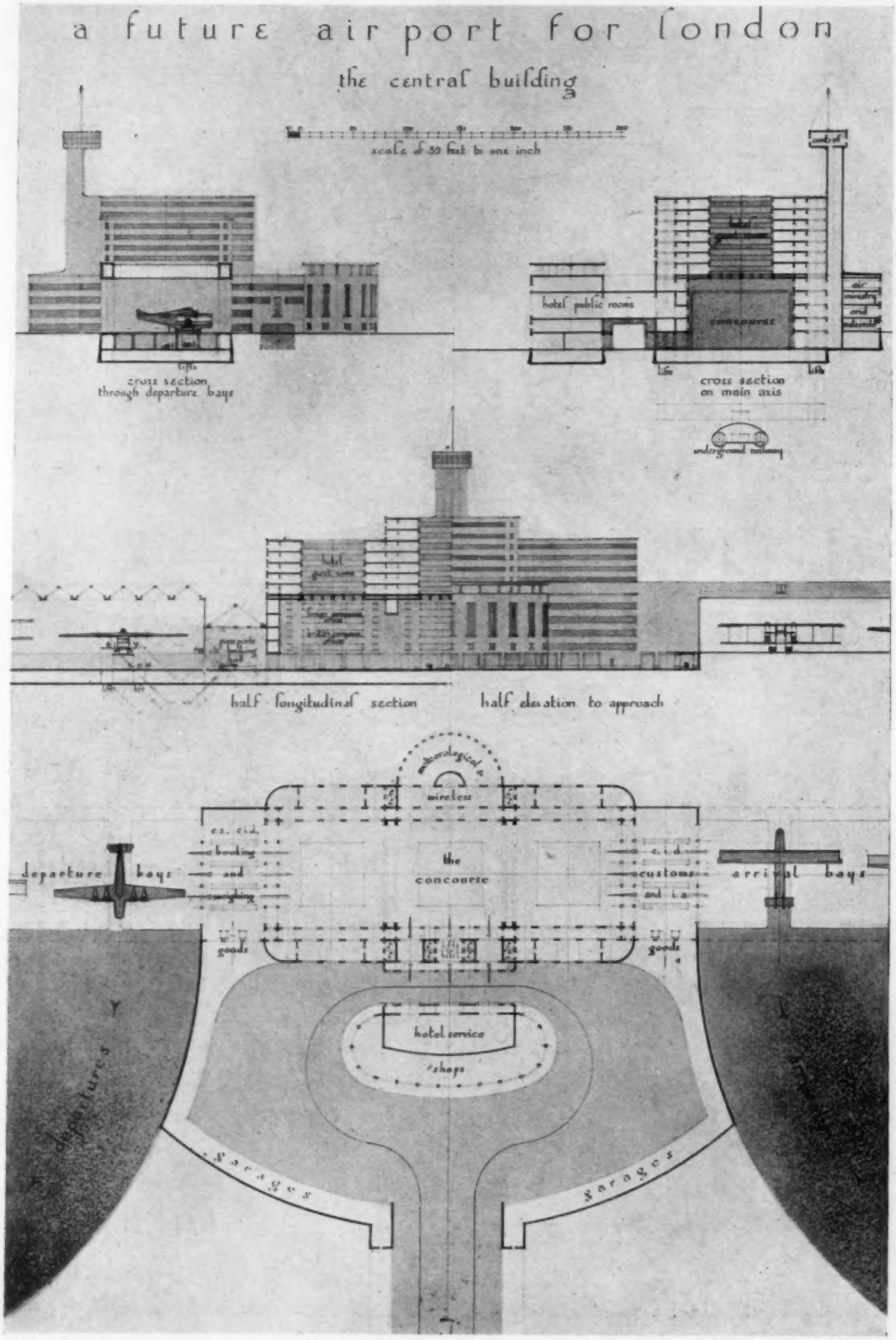
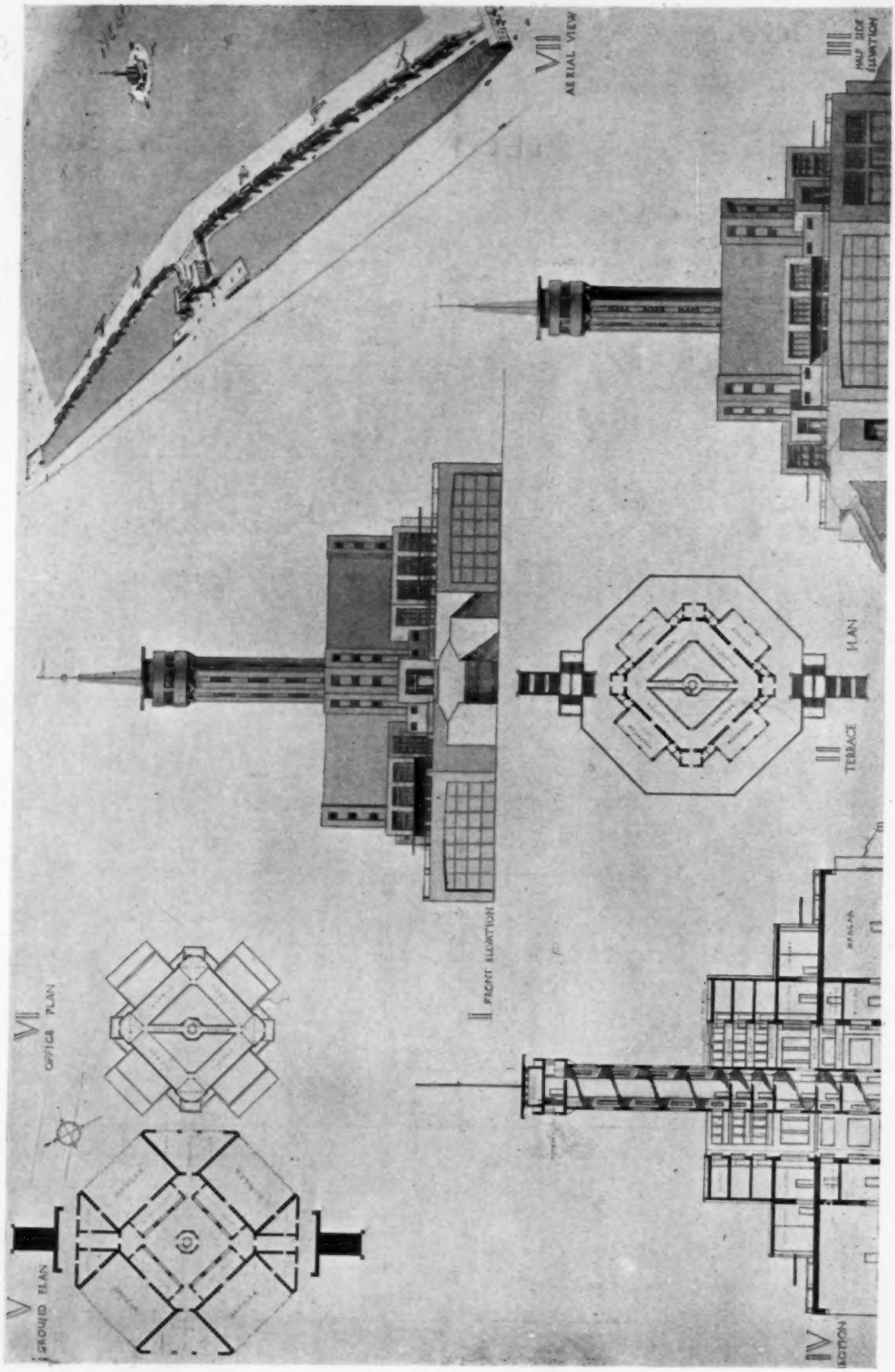


London Aircraft Terminus Competition: One of two Designs placed First.

By Mr. D. H. McMorran.



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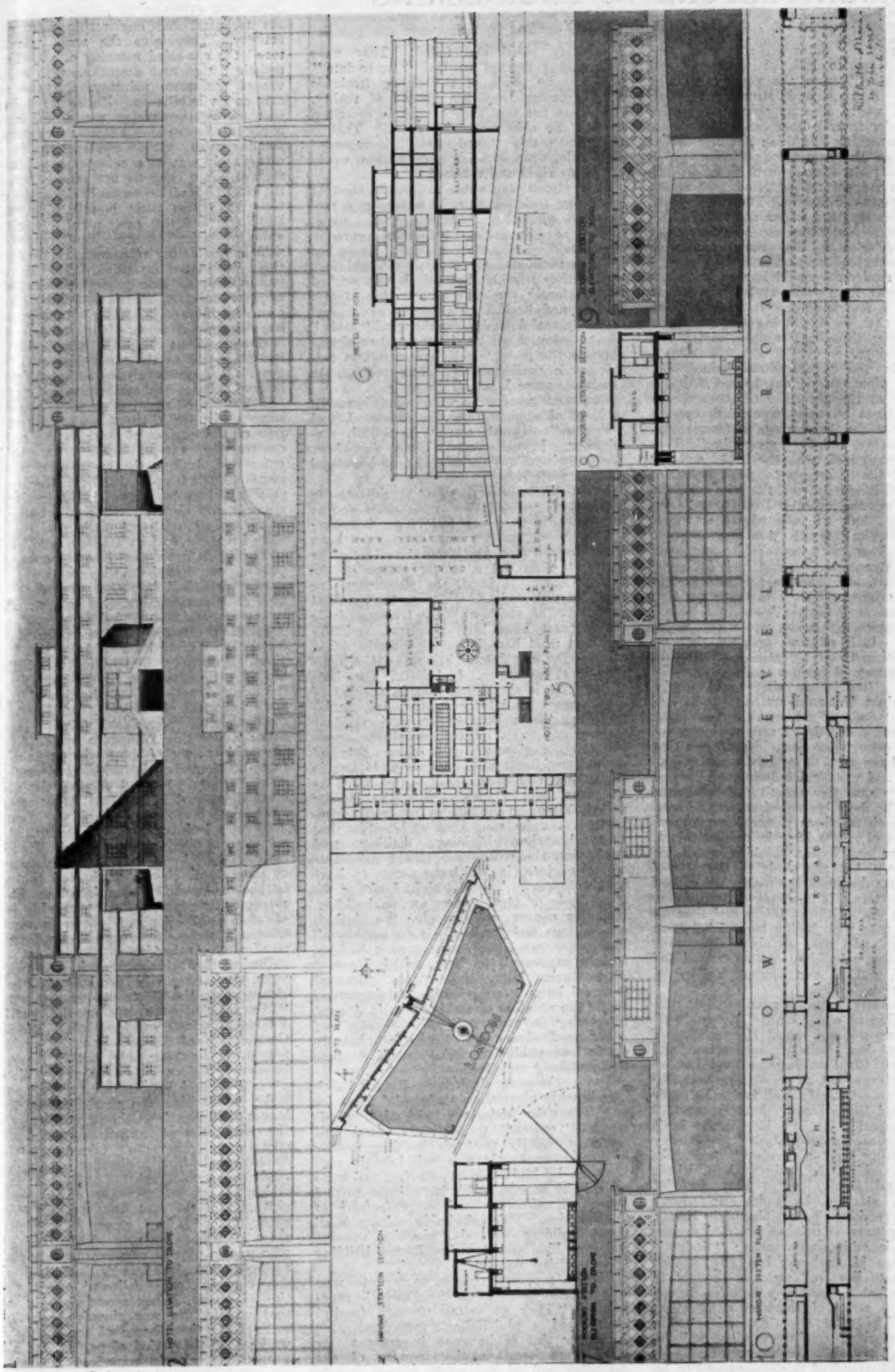


London Aircraft Terminus Competition: One of two Designs placed First.

By Mr. M. Hartland Thomas.

ARCHITECTURE AS ENGINEERING

By W. R. LETHABY.

FOLLOWING my notes on structural geometry, I want to look at what we call "Architecture" from the position of the engineer. If time and strength allowed, indeed, I would like to pursue a similar scheme under several other headings, making a whole something like this: Architecture as Building, as Engineering, as Geometry, as Workmanship, as Climate and Material Conditions, as Adventure, as Mind and Spirit, as Sociology, as Humanity. The result might be gathered together under some such title as "*Structure and Service: An Architecture of General Ideas.*" The circumstances do not now permit of such an attempt, but, if I have any readers, I would like to beg them to look away from "the styles" into such vistas for a few minutes. It really is very important that we should begin to find ways of expanding thought free from myths and make-believings.

Early in the "professional education" which my time opened out to me, I began to wonder at the absurdity of the architectural myth as it was expounded by the believers. "You know there is Classic, and there is Gothic, and they are styles." That is the substance of what the books and the offices and the academies taught. I puzzled over it, thinking: But can there be no architecture of general ideas for living men? Are Classic and Gothic in the nature of things or only historical terms? Are they to go on for ever? Then, as some relief to my mind, I studied Byzantine building and Arab and other schools, and tried to get some insight regarding origins. Thus I came to see that our designs in "Classic" and "Gothic" were not styles, but whim works and make-believings. It is only an accident that we are not doing sham Egyptian and Indian. After a century of intense study, those who were most gifted in unreality could acquire just the right Tut-ankh-amen "touch," or the Asoka "feeling." I ought to have gone mad, as Ruskin did, but I suppose I was not intelligent enough for that. Now I see that I should have worked at mathematics, engineering, and practical building, while preserving reverence for nobility of workmanship and the deep beauty of nature. I venture to touch on these personal experiences as evidence of not writing in sudden spleen. Forty years ago I was thinking much the same as now, but my study of the arts of antiquity has deepened the realisation of how much it matters. It is simply of tremendous importance that within a few years' time we shall have men with highly trained constructive powers, who will set about developing and perfecting a building custom, sound and economical, out of our present medley of trumpery style fashions.

It is necessary to try to guard against misunderstanding of many kinds. By engineering, of course, is not meant the wonders of our present-day railway approaches and stations—not Clapham Junction and London Bridge terminus—but an art of pure scientific structure—an art itself which has to be made an ideal and worked out. Such a sense of pure construction on an intelligible basis would be an anchorage against a present-day eddy of setting up "Modernism" as a *style*, instead of seeking the truly modern, which expands and forms itself. That sort of modernism, attained by piling up square boxes and making it terrible with Easter Island sculptures, is only an inverted archæology. It is whim, not reason: "design," not building. M. Corbusier has called houses "machines to live in," and the thought is suggestive; but a reasonable building is not necessarily a series of boxes or a structure of steel. The most scientific and sensible building for given conditions might still be of brick and thatch.

Some illustrations of things supposed to be modern, which I saw the other day, were repulsively jaded and faded. They were anxiously contorted to *look* "up-to-date" and had no touch of the strong freshness which springs from the ground of reality. At once I felt that they should be described as in "Ye olde modernist style." That is the point: this "modernism" is regarded as a style, whereas being truly modern would be simply right and reasonable.

It is almost impossible to get the thought *sans sham style* taken in. I remember a conversation which I had with a nice man, when, by way of illustration, I said that our buildings should be done like our ships. He replied that he could not see that they would look well if they resembled ships. It was evident that instantly the idea of a "ship style" had formed itself in his mind's eye. And there is a real difficulty, for the word "style," like so many of our words, means two almost opposite things—a "look" plastered on outside, or a reality smiling from within. In the latter sense I am all for style.

Engineering, of course, is called from the making of engines, and, in Skeat, I find "Engine" defined as: "A skilful contrivance. In early use Latin, *ingenium*. See Ingenious." This suits our architectural purpose perfectly.

In a little essay on "Architects in Antiquity," printed twenty-one years ago as an Appendix to *Greek Buildings*, I wrote: "The Greek master may seem to have approximated more to this modern idea of an architect than did a master mason of the Middle Ages. It is all the more necessary to distinguish and ask what are the essential qualities of an architect. The training of the Greek must have been practical, and the architect must have begun as a mechanician, a mason, or a sculptor. The foundation craft was most generally, I believe, the last, although it is significant that in the list of seven great architects is included Archimededes, the mathematician and military engineer. . . . Later architects were primarily engineers. (See long lists of sculptor-architects and engineer-architects in Daremberg and Saglio, Vol. I, p. 377. As to plans, s.v. *Forma*.) For the Roman period, Vitruvius has left an invaluable document. . . . he says that architecture has three branches, building, dialling, and mechanics, the latter being the construction of war-engines, in which he seems to have been an expert. The first eight books of the *Ten Books of Architecture* are on building, including one on water-supply; the ninth is on dialling; and the tenth is on machines." He was as much an engineer as a builder, and he expressed the hope, which I repeat 20 centuries later, that "men who are qualified by an exact scientific training would adopt the vocation of architecture." A most interesting German study on *Vitruvius and Building Technics*, by W. Sacker, has recently been published. (See also *Mechanicus* in Daremberg and Saglio.)

The engineering element in Roman buildings is what gives them their chief value for us. The older historians, with their minds set on "orders," proportions, names and nostrums, hardly saw this building quality in Roman work. It was well brought out, however, by Middleton, by Choisy, and more recently by Rivoira in his big volume entitled *Roman Architecture and its Principles of Construction*. This admirable volume is all about building methods, planning, vaults, and such like, and it makes Roman building quite exciting once more.

Rivoira properly objects to writers who only express opinions on their taste in ornaments. "They go astray through fanciful ideas based on phil-Hellenic prejudices. . . A matter this of immense importance, for architecture receives the impress of the character and of the needs of any people capable of producing a style. They look at the architect solely in his character of artist and exponent of æsthetics, forgetting the technical and engineering sides of his activity. They give the word 'Architecture' the one-sided meaning of æsthetic and artistic design and execution, with a liberal use of sculpture, painting, and the minor arts as its auxiliaries. But while it is true that architecture makes use of the arts, it is also a science; and it is a science pure and simple when vault construction is concerned. It was as a science that Vitruvius regarded it. They do not reflect that from the time of Hadrian onwards the great architects have won their laurels with vaulted buildings; and that their peculiar merit consists in daring scientific construction, and skill in calculating resistance, rather than in their decorative invention. The Pantheon was surely the culminating creation of the emperor-architect Hadrian. What class of men the State architects of Rome were we learn from Vitruvius. They were military engineers who accompanied the legions into the field, and at the same time civil architects. It appears to me that it was to this body of architectural and mechanical engineers (all Roman citizens) that were entrusted: siege works, with the manufacture and repair of the engines of war; laying out and constructing camps, earthworks, bridges, gates and drains; the erection of market-places (fora), temples, basilicas, the Imperial palaces and tombs, the public theatres, amphitheatres and circuses, the public baths, etc. These architectural and mechanical engineers were for the most part Italians, not Greeks." With all this I can most heartily agree, while pointing out that the author seems to use the word "artistic" in rather a careless way, as if great construction were not art. Architects are not properly hairdressers.

The Roman engineering conception of architecture was carried forward by the Byzantines. Procopius, describing the building of St. Sophia—that great solution in balancing domes—calls Anthemius of Tralles, and Isidorus of Miletia, *mechanopoioi*—mechanicians. Agathias (sixth century) says: "Now this Anthemius was an inventor of machines; one of those who apply designs to material, and make models and imitations of real things. He had reached the summit of mathematical knowledge." Stories of his mechanical inventions are told by Agathias. Anthemius had a quarrel with some neighbour whose room overhung his ground. He placed here large kettles of water, with arrangements of pipes, and then "he heated the water so that the whole thing burst up like an earthquake." This is a remarkable record of the application of steam power. A treatise, "On *mechanematical* paradoxes," is ascribed to Anthemius.

During the Middle Ages it was still the same. It has recently been said of Villard de Honnecourt, the thirteenth-century master: "We must always admire the width of Villard's interests and knowledge. He shows the solution of different practical problems, not in stone-cutting only, but in carpentry; he shows the working of a saw mill, of a screw-jack, and how to cut a screw; how to make a machine for straightening timber houses that lean from the perpendicular, and the construction of a great mangonel for siege operations. He can take approximate measurements from a distance by rough-and-ready trigonometrical methods. It is this width of interest and the direct personal character of the book that prompt Renan's encomium: 'If we except Roger Bacon, there is perhaps no man of St. Louis's day who was so near to ourselves as this obscure artificer, and doubtless Villard was in no way superior to his fellows.' At the same time, however, Renan seems right in saying that architecture was already beginning to suffer from the disease of too much paper work; that the period of perfect and simple proportions, clearly conceived and always present in the master's mind, is passing into a period of over-elaboration in detail." It is

interesting to note that Villard speaks of "engines of carpentry"; thus agreeing with Vitruvius, who says: "A machine is a combination of timbers."

During the twelfth century skilled workers and directors of work called Ingeniators appear in English building accounts. They were doubtless experts in war engines. As constructors of engines they would have been primarily carpenters rather than masons, but from the military side of their work they probably directed much of the castle building of the time. Possibly they were the earliest class of distinctly lay masters, that is they would have been attached to the service of kings and great lords rather than to ecclesiastical establishments.

Alnoth the Ingeniator was the chief building master of Henry II, and was employed at Westminster Palace and elsewhere (c. 1160). It is probable, I think, that the class was brought in by Henry II from France. About the same time two important masters employed in works of masonry at Durham were Ingeniators. Later in the century Elyas the Ingeniator was master of the works at the Tower of London. In the patent rolls of Richard II is a mandate appointing a master to be his Carpenter and Ingeniator. Here we find the relation between the carpenter and the engineer clearly brought out. Even to-day steel construction follows in great part the carpenter's experiments and inventions in the use of beams, braces, and trusses. The structural engineer is for the most part a carpenter of iron and steel.

In the earlier Middle Ages the directors of building — as of everything else — were mainly ecclesiastics, but the part occupied by the monks as real working artists appears from Dr. Coulton's detailed researches to be much less than has generally been thought. "What does the art of the Middle Ages owe to the monks? My own conviction is that it owes far less than is generally supposed, or that is taken for granted by most writers on art." (*Art and the Reformation.*)

In all ages there have been gifted and executive non-professionals who have directed building operations. Rivoira thinks that Hadrian really designed buildings. The Abbot Suger had much to say at St. Denis, and so possibly had the sacristan Walsingham at Ely. It is difficult to say when Wren ceased to be an amateur and Inigo became an architect.

At the rebuilding of London Bridge a learned French "clerk" was appointed in 1201 to complete the work. "King John who was then in France, struck with the beauty of the bridges of that country, particularly by the magnificent bridge of Saintes which lasted till the middle of our [XIXth] century, and was approached by a Roman triumphal arch, chose to superintend the works in place of Peter of Colechurch ('priest and chaplain'), a Frenchman called Isembert, 'master of the Saintes Schools.' Isembert, who had given proof of his powers in the bridges of La Rochelle and of Saintes, set out with his assistants furnished with a royal patent and addressed to the mayor and inhabitants of London. John Lackland therein vaunted the skill of the master, and declared that the revenue arising from the houses he would build upon the bridge should be consecrated to the maintenance of the edifice. The bridge was finished in 1209. It was furnished with houses, with a chapel, and with defensive towers" (Jusserand). It is significant that Saintes, from which this "truly learned and honest man" came was near Bordeaux on the western route to Spain, and he must have been proficient in Arab science.

It has been doubted whether Isembert ever actually came to take up the work, certainly the bridge was well advanced when King John addressed his order to the Mayor; and Peter of Colechurch, the earlier master, seems to have been buried in the Bridge Chapel. (*Chron. London Bridge.*) Notwithstanding all the mass of writing on the antiquities of London, there does not seem to be any clear account of this romantic structure. It was very long and narrow, with sharp far-projecting cut-waters. The chapel on the central pier was evidently a result of practical considerations. This vast pier, more than 100 ft. from point to point, was a strong buttress against the current.

The cases of non-practical direction of engineering or building design were always and must always be exceptional. Renan said of the fourteenth century: "All that century through the artist is still a mere artisan, the architect is still a master-mason."

(*To be concluded.*)

OLD RUSSIAN ARCHITECTURE

A LECTURE on this subject was delivered on January 10 by Mr. David Roden Buxton, at a meeting of the Society for Cultural Relations at the Y.M.C.A., Tottenham Court-road, W., under the chairmanship of Mr. Clough Williams-Ellis, F.R.I.B.A.

The lecturer stated that he was offering for the consideration of his audience a style of architecture almost unknown to anyone in England, and concerning which practically no literature existed in the English language. To study Russian architecture one had to start in Turkey. The Slavonic races living in what might now be termed Russian Poland received the first gem of civilisation and culture from Constantinople, and in the same way they depended upon Constantinople for their religion. It was in the tenth century that Vladimir the Great established the State Christian religion in Kiev, adopting the Eastern form of worship centred at that time in Constantinople. Christianity first took root in Russia at a place called Kherson in the Crimea, but it largely came from Constantinople. A style of building typical of the age was the Church of St. Sophie at Novgorod, built in the twelfth century, of white sandstone and mortar. It possessed the typical look of the Byzantine, and was cruciform in plan. The kind of church first built in Russia was square, although fundamentally cruciform. They filled in the gardens and added cupolas, the result being a church with five domes, the central one forming the apex. In later centuries slight divergences occurred until a German influence made itself felt. This came about through the association with Germany of the town of Novgorod. Describing a fourteenth-century Novgorod church, the lecturer said that it showed the influence of the Germans, the arcade being similar to that found in the German Romanesque. The ornamentations consisted chiefly of crosses and other details scattered haphazard.

Speaking of the Cathedral of the Assumption at Vladimir, built in the twelfth century of white sandstone, the lecturer said it was the largest in the Vladimir style, and was of very great importance because it afterwards influenced the development of architecture at Moscow. It was used for a time as the Coronation Seat of the Grand Dukes, and was regarded up to the fifteenth century as the acme of Russian architecture. It was very interesting to note that in the eighth century the Emperor Leo of Constantinople issued an edict that there should be no solid representations used in the churches because it savoured of idol worship, mosaics and frescoes being only permitted. One of the few churches that had sculpture was the thirteenth-century church at Youriev. From the thirteenth to the fourteenth centuries, owing to the inroads of the Mongols and Tartars, little building was carried out, but one of them, a building at Zvenigorod, erected in the fourteenth century, formed the beginning of the Moscow style. It took a good deal from the Vladimir buildings. The long columns were semi-circular, but instead of the arcade there was a band of carved ornaments without any suggestion of arches. That was quite characteristic of a considerable number of fourteenth- and fifteenth-century buildings. There was also a good deal of fresco work to be seen outside.

At Sergievo a certain Tsar of Moscow developed a great enthusiasm for building, and he decided to build some large cathedrals on the Kremlin Hill at Moscow. He imported Italian architects, and those architects built several of the cathedrals of the Kremlin. One of these buildings the lecturer described—a fifteenth-century building, most interesting in a way because of the peculiar semi-circular approaches by running a sort of architrave along just below the top of the arches. The Russians did not adopt the Italian Renaissance style, but they adopted the semi-circular space, and in a very large number of buildings erected in Russia after that date those semi-circular spaces appeared and became part of their architecture.

Before the tenth century, said the lecturer, no stone buildings had been erected in Russia at all; everything was constructed of wood. It was only in the sixteenth century that they began to copy the wooden buildings in brick, and it was to be observed that these wooden structures were really one of the most important factors in producing the Moscow style of the seventeenth century.

He spoke with regard to the Mosque of St. Basil, in Moscow. Fergusson had said: "It must be imagined as painted with the most brilliant colours, its domes gilt, relieved by blue, green, and red, and altogether a combination of as much barbarity as it is possible to bring together in so small a place." Théophile Gautier had written of it, "One would imagine it to be a gigantic madrepore, a crystallised colossus, a stalactite grotto turned upside down; a thing which has neither prototype nor similitude. In looking at this impossible church one is tempted to ask if it is not a whimsical will-o'-the-wisp, an edifice formed of cloud fantastically coloured by the sun, which the movement of the air will presently cause to change in form and vanish into nothingness." Continuing, the lecturer said that the central tower was just like the wooden towers which had been built century after century. The little approaches and the galleries round the base all showed the wooden influence. The arches ranged one on top of the other were evolved at Moscow; they were not constructional but merely decorative. The domes, of course, were in the Byzantine style which were gradually evolved from the semi-circular shape. It was thought at one time that they were copied from the domes erected by the Tartars and Mohammedans. The explanation given nowadays was that the ordinary hemispherical Byzantine dome was incapable of supporting heavy falls of snow.

At the end of the seventeenth century somewhat new features were introduced into the churches from western Europe, features borrowed from the rather decadent Renaissance style which they termed the Baroque. That style was practised very widely, and although some of the churches retained the traditional shape, others assumed quite new forms not previously found in Russia or anywhere else. The Baroque style was practised for a very long period, even to the eighteenth and nineteenth centuries, but that was a subject he had not studied. When Peter the Great came on the scene the national style of architecture was abandoned and classical architecture introduced. The seventeenth century saw the end of purely Russian architecture.

A vote of thanks to the lecturer moved by the chairman, seconded by the honorary secretary of the Society, was heartily accorded.

BRIDGES.

A JOINT meeting of the Architectural Association and the Design and Industries Association was held on Monday evening last. Mr. W. H. Ansell (President of the Association) was in the chair. A vote of condolence was passed with the relatives of the late Mr. V. T. Hodgson and Mr. Ralph Knott. Ten nominations for membership were approved, and twenty-two candidates, whose nominations had already been approved, were elected.

Mr. A. R. Powys then showed on the screen slides of a number of old bridges in the mediæval tradition, accompanying them with some descriptive or explanatory notes. The first was of a bridge at East Farleigh on the Medway. This bridge, said the lecturer, was of the type that had a sort of permanent centre, i.e., ribs beneath the arches, and also great heavy piers. He imagined the builders had two reasons for building piers of such great weight; one was fear of the power of the water to wash away a pier, and the other was that they might build each arch separately and have sufficient abutments to prevent it overturning. Another slide illustrated a bridge at Stanton Drew on the River Chew, Somerset. The Society for the Protection of Ancient Buildings, said the lecturer, had been attempting to make a record of every old bridge in the country. They had done most of the counties south of the Humber, and had found a number of very beautiful little bridges, of which that at Stanton Drew was one. It was of the same type as the bridge at East Farleigh. Such bridges were very narrow, and in his slides he had some to show where such bridges with cutwaters had been widened. Another slide showed Darley Dale with Darley Bridge. This was, said the lecturer, in type more a Derbyshire bridge than a Somerset one. He thought it had been rebuilt. It often happened with ribbed bridges that the ribs were cut out at some time for the sake of a better passage up and down the water, or they became loose and disappeared.

The Clopton Bridge at Stratford-on-Avon—in existence in Shakespeare's time—the Bakewell Bridge in Derbyshire, and about a dozen others were then shown. Some of these had chapels on them or buildings which originally had been chapels. One complaint made against mediæval bridges, said the lecturer, was that the water seemed blocked up with the heavy piers, and so the liability to floods was increased. It seemed to him that the mediæval builders had kept the side arches fairly clear so that flood waters could escape, but as time went on people had allowed these side arches to split up, and eventually in some cases where there were towns the arches came to be used as cellars. Thus the water was narrowed to the middle arches, and could not get away in flood time. Mediæval bridges were now destroyed so as to avoid floods, but originally floods had been well provided for.

Mr. J. S. Wilson said that the bridges Mr. Powys had shown were all, except the last, of the arch type. The arch type was the oldest and best understood. The older bridges were constructed by craftsmen of great experience, who achieved wonderful results. As the study of bridge design grew, certain rules and a sort of formulæ were introduced relating to the depth of the stones in the arch, the span, and the rise of the arch to the span. Later on pure science came into the thing, and the fact that the engineer had kept pace with the advance in science whilst the architect had not, had resulted in the engineer building all the bigger bridges of modern times. Recent advances had tended to reduce the height of the span, and another effort had been to increase the stress on the masonry, so as to get flatter arches and reduce construction depth. Granite required a pressure of a thousand tons to the square foot to crush it; in bridges the actual pressure was normally thirty to forty tons, and even in those built to the latest designs it was not more than fifty or sixty tons.

Referring to suspension bridges, the speaker said in the early days the principles on which to erect them were not well understood. Such bridges frequently failed. Tiernay Clark, a Fellow of the Royal Society and an eminent man in his day, had solved the problem by introducing a stiffening girder. One of his bridges was still in existence at Marlow, and might be regarded as the parent of all the recent giant bridges in America, for all these were strengthened in the same way.

The speaker illustrated his remarks with a number of slides.

Sir Owen Williams said there were two phases in the design of modern bridges; one was the assembly of parts in a steel bridge, the other was the hacking out of unnecessary material in precisely the same way as the sculptor hacked out unnecessary material, and found inside the material the consciousness which was really himself. Until you had removed all the unnecessary material from the structure you had not arrived at the stage where you had any right to decorate; you must first of all find its anatomy, then in such time as remained you might decorate.

Some slides followed.

Mr. Gilbert H. Jenkins said he wondered whether some engineer would not come along and try to put up a stone bridge of really beautiful material with the idea that it should be a permanent ornament. As he understood it, one of the reasons for the adoption of ferro-concrete rather than naked steel was that the steel should be covered with some material which would render its being painted unnecessary. He wondered whether we were now getting to the stage in concrete construction where we had eliminated the liability to cracks, and therefore were in a sense evolving a new permanent material.

Mr. J. S. Wilson said the principal reason bridges were not built in stone was because of cost. The cutting of stone in these days was a costly thing, and it was better to get the most magnificent granite you could get, crush it and use it as an aggregate in concrete rather than get skilled masons to cut it, form voussoirs, and so on. With regard to reinforced concrete, when it was first brought into the sphere of utility the older engineers had been very reluctant to take it up; they were not sure of it. Some went to the extent of making experiments with it. They found that it swelled or shrank according to temperature, amount of moisture in the atmosphere and so forth, and they felt, as many still did to-day, that if you had steel embedded in a piece of concrete you could not be quite sure as to what was happening. Of course, these earlier engineers had not got definite information; they had not got quantitative measurement; and it was only now, after concrete buildings had been standing twenty years, that quantitative experiments were being made. Surprising results had been obtained. According to the text-books, you embedded steel in concrete and started your calculations fair—with no stress on either concrete or steel. But the later experiments went to show that after you had cased your concrete it contracted to some extent, or sometimes expanded a little. Then there were the recent measurements of what was called plastic yield. Plastic yield had made itself evident in a bridge put up not long ago in reinforced concrete. It was a long arched bridge, and due to plastic yield the bridge came down five inches in two years. But the engineers were undaunted, and did the equivalent of driving the keystone in a bit further. They put in jacks and forced the arch up five inches and filled in with concrete. The concrete had contracted and the steel had not, so that in effect more stress was brought into the steel. This did not mean that the bridge was weakened considerably, but it was a sort of fulfilment of the fears of the old engineers who were not quite sure about reinforced concrete construction. There was no doubt reinforced concrete under certain conditions had endured very well. He had taken an opportunity of examining one of the first concrete bridges put up in this country, and could find nothing wrong with it. He imagined great care had been taken in making it. On the other hand, many people had seen some of these structures where the bones, as it were, began to show through the skin. Moisture had got in, or something else had happened causing the concrete to come off. If steel were embedded in concrete, and the concrete contracted in length to the extent of eight parts in ten thousand, and the steel was in tension, the concrete formed a lot of cracks. You did not like to think that you assumed a sort of homogeneous mass when there were all these small cracks in the concrete. With regard to the idea of corbelling out that had been mentioned, this was being done with reinforced concrete to some extent.

Sir Owen Williams said the question of whether stone or concrete should be used was not one that engineers or architects could settle—it was the spirit of the age. It was more economical to use concrete than stone, because concrete required less labour. In the majority of cases a stone bridge would require twice the height and be four times the cost of the other, and we were faced with the problem of whether we should have a bridge at all, or whether we would have one in reinforced concrete, which, though not perfect as a material, had no greater sum of imperfections than any other material. Of course, there was movement in concrete. Every material moved. When the big bridge over the Hudson was finished, the centre would move up and down considerably, due to changes in temperature. All concrete bridges "breathed." If you attempted to fight that fact you would be beaten; you should make allowance for it by giving a sufficiency of expansion or contraction joints, or in some other way. Provided you knew your material you had a chance of success no more and no less than with any other material. As to the permanence of concrete, reinforced concrete and stone, to his mind there was no question that concrete as a material was as permanent as stone; whether reinforced concrete was as permanent as stone was another matter. But bridges must be built economically; they were built for an unknown future; they might be pulled down. If you built a permanent structure tensile materials should have no place in it; but in the case of a bridge, its builders did not know whether it would be suitable in fifty years' time.

A vote of thanks to the speakers concluded the meeting.

Somerset County Buildings, Taunton.

The Somerset County Council have decided to appoint Mr. E. Vincent Harris, F.R.I.B.A., 29, St. James's-square, S.W., as collaborating architect in connection with the proposed new county buildings scheme. The special committee dealing with the scheme state that the cost is likely to exceed the original estimate of £80,000, owing to the additional accommodation to be provided.

OBITUARY.

Mr. S. G. Hudson, F.R.I.B.A.

We regret to announce the death, on Monday, December 10 last, following an operation in Eshowe Hospital, Zululand, at the age of 51, of Mr. Stanley George Hudson, F.R.I.B.A., who designed and carried out the Town Hall and (subsequently) the Law Courts, of Durban, as well as many other buildings in South Africa. The third son of the late Edward W. Hudson, A.R.I.B.A., Stanley G. Hudson left England for the Cape when 19 years old. Though delicate from birth, he nevertheless endured great hardships during his 30 years' sojourn in Africa, which included service through the Boer War. He was little more than a youth when he built the Durban Town Hall, the drawings of which were exhibited in the Royal Academy, and for which he was granted the Fellowship of the R.I.B.A.

Mr. W. R. Jaggard, F.R.I.B.A.

We have received the following appreciation of the late Mr. W. R. Jaggard, whose death was announced in our last issue:

Mr. Jaggard was lecturer in building construction in the University College, University of London, and his work as a lecturer and teacher is well known both in London and the provinces, as well as his work as an illustrator of architectural details. Students of many schools will long remember the author of the diagrams which they study and reproduce with so much pleasure, feeling that the draughtsmanship displayed for their information is that of a master; and it is true that the charm of simplicity and good proportion in design were displayed by Mr. Jaggard in an unusual and characteristic way. With all his great ability, his was an unassuming and attractive personality, and he will be remembered with pleasure by all the students and teachers to whom he lectured and amongst whom he worked.

Mr. Jaggard's training and experience in the profession of architecture was long and varied. He was articled to Mr. H. Huntley Gordon, whom he served for a period of 14 years. In 1901 he joined the staff of the Public Works Department, Cape Colony, as chief draughtsman and assistant architect. He returned to this country in 1908, to private practice, and shortly afterwards accepted an appointment as lecturer and chief assistant in the Architecture and Building Department of the Northern Polytechnic Institute. In 1923 he joined the staff of the Bartlett School of Architecture, in the University of London, a post which he continued to hold until his death

Mr. Jaggard's activities were very wide. He lectured on several occasions at the Board of Education vacation courses for teachers, and took part in the annual series of lectures to building students at the Carpenters' Hall; for many years he was examiner for the Union of Lancashire and Cheshire Institutes in building construction; and he published many works and architectural plates. He leaves a son and daughter.

F. E. D.

Sir H. Trueman Wood.

We regret to record the death of Sir Henry Trueman Wood, in his 84th year. Born on November 13, 1845, Henry Trueman Wright Wood was educated at Harrow and Clare College, Cambridge. In 1870 he obtained a clerkship in the Patent Office. After two years he resigned to do literary work and to become one of the outside "abridgers." From 1872 to 1890 he brought out several volumes of official Patent Office publications. In 1876 he was appointed assistant secretary of the Society of Arts, and three years later, on the death of Mr. Le Neve Foster, he was appointed to the secretaryship. He had a talent for orderly, efficient administration, in a tenure covering nearly four decades he had the satisfaction of seeing a remarkable advance in membership, reputation, and the standard of the technical and other lectures. The various examinations conducted by the Society developed from some 2,000 candidates (who paid no fees) to the vast numbers of the present day. He brought out a History of the Society in 1913, and when he retired from the chief executive office in 1917 he was appointed treasurer. His chairmanship of Council in 1919 brought his active service in the rooms in the Adelphi up to 47 years, and he was thereafter a frequent visitor until three or four years ago.

Mr. Ralph Knott, F.R.I.B.A.

We regret deeply to record the death, at the age of 50, of Mr. Ralph Knott. Educated at the City of London School, he was articled to Messrs. Woodd and Ainslie, and he was for eight years in the office of Sir Aston Webb, P.R.A. He was awarded a special prize for the R.I.B.A. "Tite" prize, and also won the silver medal for design at the Architectural Association. His principal works are the new London County Hall, designs for the Northern Ireland Parliament House, Belfast, in association with Mr. Arnold Thornely, and various private houses in different parts of England. In London he was responsible for Nos. 1 and 21, Upper Grosvenor-street, and 18, Upper Brook-street.

THE LATE MR. RALPH KNOTT, F.R.I.B.A.

He also designed factories for Messrs. W. T. Henley's Telegraph Company at Gravesend, and carried out the conversion of York House, Twickenham, into municipal offices for the Town Council. He was also responsible for observation wards at the Actors' Orphanage, Langley, Bucks.

By common consent the new County Hall is one of the most successful public buildings of recent years. When, in 1908, Mr. Knott won the competition opened by the L.C.C., he was only 29 years old; the foundation-stone of the building was laid by King George in 1912. For three years, during which Mr. Knott was in the Royal Air Force designing aeroplanes, work had to be stopped on the building, but on his return in 1919 it rapidly went forward to completion, and the County Hall was opened by King George on July 17, 1922. In its present form the building is incomplete, but the additional wing is now in progress. Among his other works was the £200 "Daily Mail" cottage. Mr. Knott was created a Fellow of the R.I.B.A. in 1921, and was a member of the Architecture Club. He practised in partnership with Mr. E. S. Collins, in the Adelphi.

The funeral service was held at the Apostolic Church, Chelsea, on Wednesday last.

ARCHITECTS AND THE SMOKE PROBLEM

A LECTURE on the subject of the domestic coal fire as a factor in the smoke nuisance was given by Mr. Arnold Marsh, secretary of the Smoke Abatement League of Great Britain, before a conference of architects at Manchester. Col. G. Westcott was in the chair.

The lecturer said that domestic smoke was more deadly than industrial smoke, and that the remedy, stated negatively, was "cease to burn raw coal." In practice, however, they had to concentrate on the positive side. The smokeless fuels available to-day were electricity, gas, oil, anthracite, gas-coke, and low-temperature carbonisation fuel. Electricity was probably the most convenient and simple heating agent; its chief disadvantage at present was the high cost per unit of heat, but it was hoped this would be considerably reduced when the national electrification scheme, now in course of development, came into operation. The lecturer spoke of the advantages of gas and oil, and, dealing with solid smokeless fuels, mentioned that in the offices of the Salford Health Department gas-coke, a vastly different product to-day from what it once was, was being burned exclusively on all-brick hearth fires, the fuel resting upon a solid brickwork base with no space below it. The technical difficulties which had prevented the commercial success of low-temperature carbonisation fuel had now been overcome, and in all probability there would be a rapid expansion of this method of utilising coal within the next few years. A recent investigation by the League had shown an unexpected enthusiasm by users in favour of this type of fuel, which was very bright and cheery as well as economical and efficient.

In the building of new houses, office buildings, etc., the responsibility of smokelessness or otherwise, he said, rested, if not entirely, then very largely, upon the designer. Gas and electric fires, he continued, were economical because of the ease of regulation, and because "they're in when you're in and out when you're out," but for continuous use, especially with electricity, the cost was higher than that of an open fire or central heating. As to the open fire, burning solid fuel, its abolition had been advocated in the past, but the advent of smokeless fuels had rendered this not necessary, even though it were not all but impossible. There was now, he said, a wide range of fires of all kinds for solid fuel, gas or electricity, which would harmonise with any decorative scheme or style of room.

Mr. Harry Fairhurst, F.R.I.B.A., moving a vote of thanks to Mr. Marsh, said that gentleman had been talking to, and a little bit at, architects, but this was not an architect's job; it was a job for every citizen. Architects in Manchester, however, were thanking very deeply about the elimination of smoke from great buildings, and in most of the modern buildings in Manchester the whole of a place which would represent in an ordinary way 200 to 350 separate chimneys was now served by a single flue less than two feet in diameter, emptying no smoke at all.

Watts Memorial, Guildford.

A memorial in North-street, Guildford, to G. F. Watts, R.A., is being completed. It takes the form of a garden, formerly the burial-ground of the Society of Friends, who have given the ground. Watts formerly lived at Compton, a village on the outskirts of Guildford, where are the Watts galleries and the village potteries, still carried on by his widow.

ROYAL INSTITUTE OF BRITISH ARCHITECTS

FOLLOWING are the Minutes of the Council of the Institute, December 3, 1928 :—

The General Appreciation of Architecture.—It was decided, on the recommendation of the Board, to ask the Allied Societies' Conference to consider how they could best assist the Board in furthering the general appreciation of architecture.

The Earl Haig Memorial.—The President reported that, at the request of Lord Londonderry, he had nominated, on behalf of the R.I.B.A., Sir Herbert Baker, A.R.A., F.R.I.B.A., to act as an honorary assessor to judge the models of the statue of Lord Haig, which are to be made by three sculptors in a limited competition. Sir Herbert Baker will act in conjunction with other assessors nominated by the Royal Academy and the Royal Society of Sculptors.

British Architects' Conference, 1929.—On the recommendation of the Allied Societies' Conference, the date of the British Architects' Conference, 1929, at York, was fixed for June 12 to 15.

Propaganda regarding Litter, Advertisements, etc.: Proposed Conference in London.—The Council gladly agreed to co-operate with the London Society in connection with the conference which the latter propose to hold in London early in the New Year to carry on the propaganda with regard to litter, obnoxious advertisements, etc., which was recently inaugurated at the Leicester Conference.

Exhibition of Bertram Goodhue's work at the R.I.B.A.—It was agreed to make arrangements for holding an exhibition at the R.I.B.A. of the work of the late Mr. Bertram Goodhue.

Examinations.

R.I.B.A. Summer Examinations.—The following results were reported to the Council :—

Intermediate Examination: Examined 126, passed 33, relegated 93, percentage passed 26.

Final Examination: Examined 57 (and five Part I. only), passed 30 (and four Part I. only), relegated 28, percentage passed 55.

Special Examination: Examined 13, passed 5, relegated 8, percentage passed 38.

Special Examination in Design for former Members of the Society of Architects: Examined 3, passed 1, relegated 2, percentage passed 33.

Professional Practice Examination: Examined 52, passed 48, relegated 4, percentage passed 92.

Examination for the R.I.B.A. Diploma in Town Planning.—Three candidates presented themselves at this examination, held in June, 1928, of whom two were successful, viz., Mr. S. H. Collins and Mr. H. G. Sims.

Recognised Schools.—The R.I.B.A. Silver Medal for Schools of Architecture recognised for exemption from the R.I.B.A. Final Examination was awarded to D. B. Solomon, Liverpool University School of Architecture.

The R.I.B.A. Bronze Medal and £5 in books for Schools of Architecture recognised for exemption from the R.I.B.A. Intermediate Examination was awarded to H. Jackson, Birmingham School of Architecture.

Post-Certificate (Intermediate Stage) Classes in Design.—On the recommendation of the Board it was decided to encourage all schools recognised for exemption from the R.I.B.A. Intermediate Examination only to form post-certificate classes in design.

Annual Students' Exhibition of Architects' Working Drawings.—The Board reported that they were making the arrangements necessary for holding the Annual Exhibition of Architects' Working Drawings from March 11 to 21.

Libraries of Schools of Architecture.—The Board reported that the Visiting Board had allotted the grant of £50, which the Council had made for the Libraries of Schools of Architecture for 1928, as follows :—

R. W. A. School of Architecture, Bristol, £25; School of Architecture, Leicester, £10; Department of Architecture, Surveying, and Building, the Northern Polytechnic, £15.

R.I.B.A. Prizes and Studentships.

The R.I.B.A. (Henry Jarvis) Studentship at the School of Architecture, the Architectural Association.—The Board reported that the Studentship had been awarded to Mr. H. M. Peskett.

The Tite Prize, 1926.—The Board reported that they had approved the report on his tour submitted by Mr. A. C. Cotton, Tite Prizeman, 1926.

The R.I.B.A. (Howard Colls) Travelling Studentship at the Architectural Association School of Architecture.—The Board reported that the Studentship for 1928-1929 had been awarded to Mr. E. W. N. Mallows.

The R.I.B.A. (Donaldson) Medal at the Bartlett School of Architecture, University of London.—The Board reported that the Medal for 1927-1928 had been awarded to Mr. W. G. D. Anderson.

The Godwin and Wimperis Bursary, 1927.—The Board reported that they had approved the programme of his tour proposed by Mr. J. Murray Easton, F.R.I.B.A. (Godwin and Wimperis Bursar, 1927).

The R.I.B.A. (Anderson and Webb) Scholarship at the Cambridge University School of Architecture.—The Board reported that the Scholarship for 1928-1929 had been awarded to Mr. J. R. Smith, of Northampton.

The R.I.B.A. Maintenance Scholarships.—The Board reported that the following had been granted renewals of their R.I.B.A. Maintenance Scholarships for the year 1928-1929 :—

B. I. Day (R.W.A. School of Architecture, Bristol); A. K. Brown (School of Architecture, Armstrong College, Newcastle-upon-Tyne); Herbert Jackson (Birmingham School of Architecture); E. J. White (Bartlett School of Architecture, University of London); E. L. W. Davies (Bartlett School of Architecture, University of London); J. F. D. Wylson (Architectural Association) (A.G.B.I. Maintenance Scholarship); C. J. Bartlett (Welsh School of Architecture, Cardiff) (R.I.B.A. Fourth and Fifth Year Maintenance Scholarships).

The R.I.B.A. (Archibald Dawnay) Scholarships.—The Board reported that the following awards had been made :—

(*a*) An R.I.B.A. (Archibald Dawnay) Scholarship of £75 for the year 1928-1929 to L. A. Chackett, Birmingham School of Architecture;

(*b*) An R.I.B.A. (Archibald Dawnay) Scholarship of £50 for the year 1928-1929 to J. Hughes, Liverpool University School of Architecture;

(*c*) A second year R.I.B.A. (Archibald Dawnay) Scholarship of £50 for the year 1928-1929 to W. G. Plant, Liverpool University School of Architecture.

Corresponding Members of the Board.—On the recommendation of the Board the following were appointed Corresponding Members of the Board of Architectural Education and of the Schools Committee :—Professor G. E. Pearse, A.R.I.B.A. (School of Architecture, University of the Witwatersrand); Professor C. H. C. Wright (Department of Architecture, University of Toronto); Professor E. R. Arthur, A.R.I.B.A. (Department of Architecture, University of Toronto).

Bequest by the late Mr. James Neale.—It was decided that the bequest by the late Mr. James Neale should be devoted to a Bursary for measured drawings of old buildings to be awarded on lines similar to those on which the Godwin Bursary is awarded, and a scheme drawn up by the Board for this purpose was approved.

Dr. Raymond Unwin.—The Council passed a very cordial vote of thanks to Dr. Raymond Unwin at the termination of his appointment as Chief Town Planning Inspector and Chief Architect, Housing, at the Ministry of Health, for the valuable services he has rendered to the art of architecture and to the members of the profession while occupying that important position. They also expressed their appreciation and congratualtions to him on his new appointment as technical expert to the Greater London Regional Planning Committee.

Exhibiton of Black and White and Colour Work by Members of the R.I.B.A.—A very hearty vote of thanks was passed in favour of those members who had lent drawings for this exhibition.

The Rural Reconstruction Association.—The Town Planning and Housing Committee reported that they had appointed Mr. Percival M. Fraser, F.R.I.B.A., and Mr. G. E. S. Streatfeild, F.R.I.B.A., to represent the R.I.B.A. at the Conference on "Educational Policy in its Relation to Rural Reconstruction," held by the Rural Reconstruction Association on November 10, 1928.

The Control of Petrol Filling Stations.—The Town Planning and Housing Committee reported that the Home Secretary had appointed a Committee to advise as to the most suitable measures for carrying out the object which Parliament had in enacting Section 5 (By-laws as to petroleum filling stations) of the Petroleum Amendment Act, 1928 (now incorporated in the Petroleum (Consolidation) Act, 1928), and that, at the request of the Home Office Committee, they had prepared and sent a memorandum of their views on the subject, Mr. H. V. Lanchester having been appointed to give oral evidence on behalf of the R.I.B.A.

The Architects' Benevolent Society.—A grant of £150 was made to the Architects' Benevolent Society for the year 1928.

The Foundling Estate Protection Association.—A donation of £5 5s. was given to the funds of the Foundling Estate Protection Association.

The Bertram Goodhue Memorial Fund.—A donation of £5 5s. was given to the Bertram Goodhue Memorial Fund.

University of London Architectural Education Committee.—Mr. Henry M. Fletcher, F.R.I.B.A., and Mr. L. Sylvester Sullivan, F.R.I.B.A., were renominated to represent the R.I.B.A. on the University of London Architectural Education Committee for the year commencing March 1, 1929.

The Royal Sanitary Institute and Sanitary Inspectors' Examination Joint Board.—Mr. H. D. Searles-Wood, F.R.I.B.A., was renominated to represent the R.I.B.A. on the Royal Sanitary Institute and Sanitary Inspectors' Examination Joint Board for a period of three years ending December 31, 1931.

Revision of the R.I.B.A. Scale of Charges.—Proposals for the revision of the Scale of Charges prepared by the Special Committee on the Working of the Scale of Charges were approved and will be submitted to the General Body at an early date.

Studentship.

The following Probationers were elected as Students of the R.I.B.A. :—

B. G. Bandekar (Bombay School of Art), L. A. Chackett (Birmingham School of Architecture), G. L. M. Jenkins (A.A.), K. E. Moore (Northern Polytechnic), H. G. Porter (A.A.), C. H. B. Smith (A.A.), S. Sutherland (Robert Gordon's Colleges, Aberdeen).

Final Examination: Thesis.

The attention of candidates is officially called to the fact that if a design, accompanied by a detailed report, is submitted as the thesis in this examination, it will be expected to reach a very high standard of design.

Tite Prize and Soane Medallion, 1929.

The attention of intending competitors is called to the fact that the preliminary competitions for the Tite Prize and the Soane Medallion will be held in London and at centres in the provinces on Tuesday, March 26, and Wednesday, March 27, respectively. Forms of application for admission to the preliminary competitions may be obtained at the R.I.B.A., 9, Conduit-street, W.1. The closing date for the submission of forms of application is Monday, February 25.

SOCIETIES AND INSTITUTIONS

ENGLISH STEPS AND STAIRCASES.

On Wednesday, January 23, Mr. J. Hubert Worthington, M.A., A.R.I.B.A. (late Professor of Architecture at the Royal College of Art, London), gave a lecture on this subject in the Arts Building, Manchester University. This was the first of a course of three lectures arranged jointly by the Royal Manchester Institution, the Manchester Society of Architects and the Institute of Builders (Manchester Branch). The lecturer had before him a gathering of artists and architects, master builders and craftsmen, students and apprentices numbering in all some 200 persons, and he at once gathered these interests together. For the artists he painted a dramatic picture of crowds melting away down the stylobate of noble Roman buildings; for the constructors and craftsmen he gave a hint of the difficulties of erection and the intricacies of design; and the laymen he made to see something more in steps and stairs than a means of getting to the next floor.

The lecturer then outlined the following simple principles to be applied in design:—(1) Stairs must be designed in proportion to their use; (2) the general plan of the building must be taken into consideration; (3) they should be easy of ascent and descent. The lecturer here quoted a well-known rule dating from Roman times that the width of the tread plus double the riser should equal 23 in. (this rule applied with the steady slope of 6 in. rise and 11 in. tread and the steep stair of 7 in. rise and 9 in. tread); (4) straight flights should not consist of more than 12 steps; (5) landings should equal the stairs in width, (6) head room should be ample; (7) handrails must be provided of a type suitable to the users (the lecturer instanced the Deanery at Ripon, where the Dean in residence had a family of 19 and had provided below the main handrail a secondary rail within reach of the children); (8) the designer must keep in touch with his material—different types of material called for different types of stair design.

A number of slides were then shown, and the lecturer dealt with mediæval spiral turret steps, the elaborate square stairways of Elizabethan halls, passing on to the masterpieces of Inigo Jones and Christopher Wren and to the modern work of Sir Edwin Lutyens. He then drew attention to some local masterpieces, such as the staircase at Platt Hall, Manchester, and the one at the Art Gallery in Mosley-street. Referring to the entrance steps of Old Newgate Gaol, the lecturer said they were of so forbidding an aspect that they would "stop more crimes than all the judges on the bench."

Mr. G. S. Harding, of Nantwich, a Fellow of the Institute of Builders, proposed a vote of thanks to Mr. Worthington for his lecture, which was seconded by Mr. Maxwell Reekie, of the Royal Manchester Institution, and heartily supported by all present.

Mr. Worthington, in responding, cordially thanked Mr. Thomas Howarth, J.P., F.I.O.B., of Rochdale (Chairman of the Manchester Branch of the Institute of Builders), for his chairmanship and drew attention to the fact that these lectures were first started some seven or eight years ago on the initiative of a former Chairman of the Institute of Builders' Manchester Branch (the late Mr. John M. Macfarlane).

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS.

Ancient Lights.

A lecture on this subject was delivered by Mr. Graham Mould, barrister-at-law, before this Association, at 1, Wilbraham-place, S.W.1, on Friday, January 25, under the chairmanship of the President, Major R. I. Tasker, M.P., L.C.C.

Giving a general synopsis of the law relating to the subject, the lecturer referred to the case of Colls *v.* The Home and Colonial Stores, because that case, he said, marked a basic deviation in the law of ancient lights as previously understood. He would first like to remind them of what used to be regarded as the law prior to that case. It was this—that if anyone had ancient lights, and if anyone by building so interfered with those lights, then no matter how much light one had left anyone was entitled to succeed in an action for an injunction or in a claim for damages. The question was then not what light one had left, but what was taken away. Before Colls, if the owner of the ancient lights could say that any portion of his ancient lights which was otherwise than trivial had been taken away, he was entitled to proceed. Colls, as they all knew, put a totally different construction on the matter. Colls, on the authority of the House of Lords, declared that a very large number of cases which had been decided before that time had been erroneously decided, and in reading any book to-day on the subject the first thing to see was, was it written before Colls or after? The head-note in the report of this case in the House of Lords dealt shortly with the substance of the case: "To constitute an actionable obstruction of ancient lights it was not enough that the light is less than before. There must be a substantial privation of light, enough to render the occupation of the house uncomfortable, according to the ordinary notions of mankind and (in the case of business premises) to prevent the plaintiff from carrying on his business as beneficially as before.

In the various judgments there were one or two extracts to which he desired to call their attention. Lord Halsbury (who was the Vice-Chancellor of that day) said: "The test of the right is, I think, whether the obstruction complained of is a nuisance, and, as it appears to me, the value of the test makes the amount of right acquired depend upon the surroundings and circumstances of light coming from other sources, as well as the question of the proximity of the premises complained of." Lord Davey, in his judgment, adverting to their old friend the rule of 45 degrees, said: "The rule of 45 degrees is not, of course, a rule of law, and is not applicable to every case." The lecturer said he thought the fair way to regard that rule was that it was quite wrong to suggest that 45 degrees bound everyone. It did afford a *prima facie* presumption, and nothing more. Lord Lindley, in his judgment, said: "As regards light from other quarters, such light cannot be disregarded; for, as pointed out by Vice-Chancellor James, the light from other quarters, and the light the obstruction of which is complained of, may be so much in excess of what is protected by law as to render the interference complained of non-actionable. I apprehend, however, that light to which a right has not been acquired by grant or prescription and of which the plaintiff may be deprived at any time, ought not to be taken into account."

Continuing, the lecturer said he wanted his audience to notice especially that point about light from other quarters. The question to-day, as he understood it, was this—had the obstruction constituted a nuisance? In considering whether it was a nuisance, they had got to regard the conditions as they were to-day, including all light coming from other quarters. Take this light of which the owner of the ancient lights might be deprived of at any time—then it could be taken into account as the light coming from other quarters, the light to which he was permanently and of right entitled. That, as he saw it, was Colls' case, and, starting from that case, and based upon it, they had several decisions all of which recognised Colls, some of which helped to explain it, but generally they had what he might almost regard as a new code of law, at any rate a code of law with a new interpretation. The old questions used to proceed on the question "aye" or "no" as a nuisance. Then they got for many years decisions which did not consider the question of nuisance at all. One way or the other decisions used to assume that if a man had ancient lights that he was entitled to every ray of light, every bit of light which came to him, and if he were deprived of it he had an action in law.

A very important case was the case of Andrews and Waite, tried in 1907. The main point decided there was: "The question whether the right to the access of light to a building which has been enjoyed through one window is preserved upon an alteration of the building depends on the identity of light, not on the identity of aperture. In cases where the light comes to any window over the roof of higher buildings at an angle, and the building is altered by advancing the wall in which the window is, the right to access of light will be preserved if any window or aperture in the new wall intercepts and gives access to any substantial part of the light which passed through the whole window. It makes no difference that the new window or aperture is at a much higher level than the old window." Continuing, the lecturer said this was one of the comparatively few cases in the Law Reports which was adorned by a plan. The plan showed the old wall, and then an alteration in it, and then a further alteration. That case was tried before Mr. Justice Neville and he said this: "That being so, the conclusion I have come to is this, that a substantial amount of light which comes in through the present skylight and the new window on the first floor reaches the places where the old window on the ground and first floor were situated both before and after the alterations of 1888 and 1895, and I think that the buildings proposed by the defendant would occasion a nuisance to the occupants of the house as it exists, and to a house lighted, as to its first and ground floors, as the old house was both before and after the alterations." Later on, Mr. Justice Neville said: "It seems to me that the question which has to be determined is, whether proof is necessary of identity of the window or aperture through which the light claimed has been admitted to the dominant building, or whether the true matter for investigation is the identity of the light which has been so admitted. How far the complete alteration of the character and structure of a building may serve to prevent the acquisition of light, or the enjoyment of it after it has been indefeasibly acquired, is a matter which I think I need not consider here, because, although the plaintiff's premises have undoubtedly been considerably altered by his various improvements, the character of the building remains substantially unchanged." Finally, Mr. Justice Neville summed up in this way: "I think the real test is, as I said before, identity of light, and not identity of aperture, or entrance for the light. If that is so, then in the present case the plaintiff is entitled to an injunction, because I have come to the conclusion that not only do the defendant's buildings occasion a nuisance to the plaintiff's premises as they exist at the present time, but that they would have caused a nuisance to the plaintiff's premises had they remained simply in the enjoyment of the amount of light which has been enjoyed throughout the term from 1880 onwards. I think that undoubtedly the interference with the light occasioned by the defendant's buildings would have amounted to a nuisance in 1880 or at any time since, and that seems to me to be conclusive of the case." The lecturer said what the learned judge was dealing with there, and it was one of the most important decisions from that point of view, was that you had to have regard to the identity of the light and not necessarily to the identity of the aperture.

The lecturer then referred to a number of cases which had been decided dealing with various aspects of the subject. In conclusion, he said he thought if anyone studying the law began with Colls, and studied everything since Colls, a sound working knowledge of the subject would be the result.

Following the lecture a number of questions were raised, to which Mr. Mould replied. A hearty vote of thanks to the lecturer ended the proceedings.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

Damp Walls.

[REPLY TO "H. R. M.," JANUARY 25.]

SIR,—The persistence of dampness in walls after the original causes have been removed is a very common trouble, and it is frequently due to the fact that the moisture in drying out to the surface carries with it, in solution, saline matter that was distributed through the thickness of the wall. The evaporation of the moisture from the inner face of the wall leaves this saline matter as crystals, which fill the pores of the bricks and mortar joints near the surface.

This happens, to a slight degree in newly constructed walls, owing to the drying out of the moisture of construction, and results in what is commonly known as "efflorescence." The disruptive effect of such crystallisation would be quite sufficient to cause the crumbling of the plaster, and as the salts have the power of attracting moisture, just as table salt does in damp weather, the surface will be made damp whenever the air is heavily charged with moisture. In the present case, by applying a damp-proofing coating on the outer face of the wall, querist prevented the escape of the moisture except by evaporation from the inner face, and this would, of course, tend to accentuate the trouble.

The best treatment for this, and for any case of dampness in which the origin is at all obscure, would be to hack off the inside plaster and re-render with waterproofed cement mortar, finishing with an absorptive skimming coat of ordinary plasterer's setting stuff gauged with a little plaster of Paris.

L. E. WALKER.

Electric Lamps.

[REPLY TO MR. F. CARTER, JANUARY 25.]

SIR,—The first four lines of the second paragraph of Mr. Carter's letter are not quoted from the article mentioned; in fact, they are incorrect and rather muddled. If reference be made again to article XL, dated October 26, 1928, the following, if necessary, should make it clear :—

Carbon-filament Lamps.

The current passing through the old 32-c.p. carbon filament lamps on 100-volt supply was 1 ampere, and since volts × amperes = watts, therefore 100 volts × 1 ampere = 100 watts.

Therefore the electrical energy consumed by the 32-c.p. carbon filament lamp was 100 watts.

If this lamp were burning for 10 *hours* it would consume 100 watts × 10 hours, which is 1,000 watt-hours, which equals 1 kilowatt-hour, which is 1 B.T.U.

Half-watt Lamps

(*i.e.*, lamps using a half-watt candle-power.)

A 32-c.p. lamp would consume 16 watts. This lamp, burning for 62.5 *hours*, would consume 16 watts × 62.5 hours = 1,000 watt-hours = 1 kilowatt-hour = 1 B.T.U.

In reply to the further questions, the candle-power of the glass bulb (electric lamp), installed in any house room, depends entirely upon the illumination required in the room. It is possible to purchase lamps, or combinations of lamps, that will give any required candle-power. Further, lamps can be obtained of given candle-power or given wattage, *e.g.*, a 100-c.p. lamp, or a 50-watt lamp, provided you buy a half-watt lamp. The one precaution that should be emphasised is to make sure that the lamps purchased are of the house-supply voltage, *i.e.*, don't buy a 200-volt lamp to use on a 100-volt supply, or *vice-versa*.

To calculate the number of watts used by any house installation, add up the number of candle-power required at the different light points. Halve this number—if using ½-watt lamps—and you get the number of watts being consumed. Suppose it comes to 500 watts, then, when all the lamps are burning, the electrical energy being consumed is 500 watts, or half-a-kilowatt, and in two hours this will amount to one Board of Trade unit (B.T.U.). A. M. GILES.

Condensation.

[REPLY TO "STUDENT," JANUARY 18.]

SIR,—There is a method of dealing with condensation which is often used on board ship which may be useful to the inquirer. The surface is painted over with rather thick paint and, whilst wet, cork dust (more strictly described, perhaps, as granulated cork, but known in the fruit trade as cork dust) is thrown against it so that the painted surface is well covered with it. This is left to dry hard and the surface of the cork dust is painted or otherwise decorated, preferably with a spray painter. If a small quantity, say, a few hundredweights of cork dust, is required, it can be obtained from local greengrocers, as it is used for the packing material of the white grapes which come from Spain in barrels. The season for these grapes is nearly ended now, so that supplies should be secured without delay.

WM. A. RICHARDSON.

Frost.

[REPLY TO "THAW," JANUARY 25.]

SIR,—Frost expands the moisture in mortar as in other things and separates the matrix, in so doing leaving the particles loosely separated at the thaw. In the case of mortar in brickwork it seems hardly ever to affect more than the outer ½ in. or so, the reason being that the mortar is nearly moisture-free further in the wall very soon after laying the brick. Bricks in frosty weather should be kept and laid dry. Mortar or plaster that has been frozen through and expanded will not set after thawing. Plaster does, however, withstand frost if it has passed a certain drying or setting stage; it can in such instances probably accommodate within itself the expansion. It is said that frost draws moisture to the surface, which, if true, is obviously helpful. F. PALMER.

Engine Problem.

SIR,—Would any of your readers kindly give a full explanation of the following problem and the reason why the answer should be 1,040 lb. ft.?

The crank of an engine is 1 ft. long and the connecting rod is 3 ft. 6 in. long. If the uniform pressure on the piston is 1,000 lb., find the greatest turning moment on the crank during the "outstroke."

C. C. HEREFORD.

Cased Steel Joists.

SIR,—What is the increase in strength of a rolled steel joist entirely embedded in concrete in comparison with its strength without such casing?

STRESS.

The Various Industries (Silicosis) Scheme 1928 : Statutory Rules and Orders, 1928, No. 975.

[REPLY TO "READER," JANUARY 25.]

SIR,—There appears to be no doubt that the scheme is applicable to the building trade. It is framed very widely, e.g. : Clause 2 (vi.) applies to all workmen employed "breaking, crushing or grinding of flint or materials containing ground flint; or handling, moving, sieving, mixing or packing of broken, crushed and ground flint or materials containing such flint."

LEGAL.

Chimney Stack Problem.

[REPLY TO "INQUIRERS," JANUARY 18.]

SIR,—Your correspondents wish to replace a Cornish boiler 18 ft. by 5 ft. 6 in. by a Lancashire boiler 30 ft. by 8 ft., and to utilise, if possible, the existing chimney 48 ft. high by 2 ft. square. It is unlikely that this chimney can be raised another 20 ft. with safety, and your correspondent must not expect to obtain the full capacity from the Lancashire boiler without increasing the area of the chimney to, say, 3 ft. 4 in. minimum internal diameter. The height should be not less than 80 ft., and if built still higher a corresponding increase in evaporation will be obtained.

A brick chimney is more permanent than steel; the latter is subject to internal and external corrosion, and therefore requires more maintaining. Under bad conditions a steel chimney may not last more than six to ten years, and the difference in cost is not so great when it is remembered that foundations and a brick base are required in each case.

A. C. BRANCH, M.I.MECH.E.

Cavity Wall Construction.

[REPLY TO "DOUBTFUL," JANUARY 11.]

SIR,—Your correspondent is likely to find trouble both with efflorescence outside and condensation inside. The former is not serious, as it will work itself free in the course of a year or two, but it is inevitable where cement only is used, and it does disfigure a building while it is in evidence, and just at a time when an architect is anxious to see it at its best. He will find that a lime mortar gauged with about one part of cement to six of mortar will have nearly all the advantages of compo. and avoid the efflorescence. Similarly, I should use the Sirapite for the finishing coat only as a gauging.

In spite of text-books, I consider airbricks at the top of a cavity not only unnecessary but undesirable, as they only serve to bring the outside temperature four and a half inches nearer the inside of the house than would otherwise be the case. A sealed cavity, on the contrary, is actually an insulator against heat and cold. CONSTRUCTION.

Gauged Mortar.

SIR,—The practice of gauging lime mortar with cement appears to be increasing. Can you tell me what is the actual effect upon the setting of the mortar? I am not clear whether the cement and lime set independently, or whether the whole nature of the lime mortar is changed by the gauging.

PRACTICE.

Condensation : Construction of Dancing Floor.

[Answers to these inquiries have been forwarded by post.]

Bridging.

SIR,—What is the real object of bridging or strutting applied to wood-joisted floors, and can you tell me whether solid bridging is preferable to herring-bone or otherwise?

STUDENT.

Contract Question.

[REPLY TO "READER," JANUARY 25.]

SIR,—Apparently it is admitted there has been a breach of the contract by the builder in delay in completion, and his contention is that there had been a breach of the contract by the employer, in that he has not complied with the contract as to payments. But "two wrongs do not make one right," and "Reader" cannot himself adjust the matter. He should endeavour to arrange that the question of the delay be settled by arbitration under the contract, and counterclaim as a "set-off" interest (usually 5 per cent.) on monies withheld on certificates. (See Creswell on Building Contracts.) CONTRACT.

Books Wanted.

SIR,—Can any reader inform me if there are any books dealing with management or organisation for a firm engaged in the manufacture of articles made by woodworkers' machinery? BUILDER.

THE BUILDING TRADE

NATIONAL FEDERATION OF BUILDING TRADES EMPLOYERS

ANNUAL DINNER.

MR. FRED THORNE, J.P. (President) occupied the chair at the annual dinner of the National Federation of Building Trades Employers, held at the Hotel Victoria, Charing Cross, on Tuesday evening. The company included Mr. A. H. Adamson, Mr. Charles Boot, Mr. E. J. Brown, Mr. G. M. Burt (President, International Federation of Building and Public Works Contractors), Mr. R. Coppock (President, National Federation of Building Trade Operatives), Mr. Jno. Croad, Mr. T. R. D. Davies, Mr. E. M. Dence, L.C.C., Mr. J. Denver, Mr. J. E. Drower, Sir Frank Dyson, K.B.E., Alderman Stephen Easten, J.P., Mr. C. I. Epps, Mr. A. B. Falkner, Mr. W. F. Gibson, Mr. Wm. Hull, J.P., Mr. H. T. Holloway (President, Institute of Builders), Mr. T. Howarth, J.P., Mr. I. E. Jones, M.A., B.Sc., Mr. Alfred Legge, Alderman C. H. Long, J.P., Mr. Ian MacAllister (secretary, Royal Institute of British Architects), Sir Ernest Moir, Lt.-Col. J. Mitchell Moncrieff, C.B.E., Mr. E. J. Rimmer, B.A., Mr. R. L. Roberts, Mr. W. J. Rudderham, Mr. W. Gilbee Scott, Mr. H. D. Searles-Wood, Sir J. Walker Smith, Dr. R. E. Stradling, Mr. Walter Tapper (President, Royal Institute of British Architects), Major R. I. Tasker, M.P., Mr. R. H. Tribe, Mr. A. G. White (secretary of the National Federation), and ladies.

Following the toast of "The King," Councillor Wm. Hull (Senior Vice-President) proposed "The Architects and Surveyors." He said when they remembered that about half the savings of the nation was invested in building, they would readily perceive what an important part the architectural and surveying professions played in the national life; from the same fact they would realise the importance of the building industry, and the value the nation received from the mutual co-operation of the architect, surveyor, builder, and craftsman. As a Federation of building trade employers, they were justly proud of the good relations existing between themselves and those professional bodies. After an allusion to certain laws of 4,000 years ago, under which an architect was condemned to death if one of his buildings collapsed, the speaker referred to present-day tendencies in building. In the race for prosperity, he said, attempts were being made towards the Americanising of the building industry, with all the standardisation that implied and the tendency towards the elimination of craftsmanship. But they were justly proud of building craftsmanship and desired to cultivate craftsmanship as much as possible.

In reply, Mr. Walter Tapper, A.R.A., P.R.I.B.A., said, on behalf of the architectural profession, he would like to say they realised in the National Federation a body admirably organised and doing a really great work. Some people to-day thought there was too much organisation. Up to a point he sympathised with them, but the fact remained that organisation had come because it was a necessity of modern times. During and since the War, "go as you please" methods had been found to be quite useless, and they were face to face with a world in which organisation and collective action were the order of the day, and if they were all loyal to one another he did not see how they could stand outside. After all, it seemed the case that the best men, broadly speaking, in all great national organisations were doing a great public service which could not be too highly valued. Was it not a good thing that they should have the best men in every profession and industry giving them their good guidance? Of course, they made mistakes, as they all did; they had made mistakes in his own profession; but, on the whole, he thought great organisations such as theirs had done and were doing great and valuable work, and they would be the worse off if such organisations did not exist. Altogether he could sincerely congratulate the Federation on its increasing influence and strength. Architects and builders still had their difficulties, but with mutual regard and understanding, and a real desire to do the best in all their difficulties, they would eventually arrive at a wise and happy solution of their problems. He believed that if they tried to look at all questions from the other man's point of view, they would not do so badly. The architect and builder were linked together by bonds which should never be loosened. Both were indispensable factors in the great building industry and the problems of to-day, and unless they worked harmoniously and with a real understanding and regard for each other, they would never arrive at the solutions they were so anxious to reach. They heard much in these days of new methods and ideas in building, and they must not shut their eyes to any improvements they thought proper. The price of progress was unceasing vigilance, and they must not be content to go on doing things because they had always been done. But, on the other hand, they must not forget those great traditions of fine craftsmanship and honest human work which for centuries had been the pride of the English builder, and which had left them such a priceless heritage of fine building. Methods might be good even though they might be ancient, and he thought they should all have a little bias in favour of old and well-tried methods, only cutting them out when they were satisfied that the necessity for a change had been proved. In the housing experiment made after the War he believed some very useful lessons had been learned, and it was remarkable how traditional English methods of building and material had justified themselves as still the best that could be found.

Sir Ernest Moir proposed the toast of the "National Federation and its President." The Federation had, he said, done an immense amount of good for the industry. He had had the good fortune to have been closely associated with the operatives, and knew how difficult it was sometimes to persuade them to do what the employers thought they ought to do. He had been chairman of the committee which dealt with alternate methods of house construction, and in that connection with what he might call the "Weird" house. The inventors of those new systems practically all started with a declaration to the effect that they were at war with all trade unions, and that was not a happy beginning. He had suggested to Lord Weir that the building trade had made houses in the past of steel on wood frames but they had to believe that the Weir house was something new and special. But he gathered the steel house was not acceptable to the architect, the builder, or the operative. They heard a great deal nowadays about rationalisation, a wonderful panacea for all ills. He believed the British Association had a special committee endeavouring without success to find out what the word meant. His opinion of rationalisation was that it was another name for a trust. Years ago, rationalisation put up the price of soap from 3d. to 1s. a bar; it seemed to him to be only another name for profiteering. Rationalisation, as he understood it, was a combination with the object, amongst other things, of having selling agencies to control the lesser dog by the bigger dog. But in the National Federation of Building Trades Employers, which was a novel organisation, they got all the builders together, big and small, and worked the organisation for the benefit of the whole building industry. Such an organisation was the very best of rationalisation, and the National Federation had incidentally been of the greatest value to all other industries by keeping up the tradition of apprenticeship which no other industry had done to the same extent; that alone was a sign of what the Federation meant to the country. With the architects, the Federation had framed a standard form of contract which was a model to the rest of the world.

In replying, the President said it was not so long ago that societies or unions or associations of men banded together for the protection of the common interests of their members were considered to be beyond the pale, and were severely discouraged under the then law of conspiracy. But gradually they had won a place in the sun, although even yet as unincorporated bodies they enjoyed only a quasi-recognition so far as their legal status was concerned. The fact that such organisations had secured a certain amount of recognition was some guarantee that they were necessary to the proper carrying on of the businesses of those whom they represented. The complex relations incidental and necessary to the carrying on of industry to-day had rendered necessary the existence of the National Federation of Building Trades Employers in order to provide machinery for ascertaining and focusing the opinion of building trades employers, so that their view could be formulated and made known to those with whom they came into contact in the conduct of their business. A condition precedent to the successful conduct of negotiations was the creation and maintenance of friendly relations between the organised bodies representing the different branches of the industry; there were times when that was a difficult task, but during his year of office cordial relations had been maintained with other organisations. An exception related to trade disputes in three important districts between the National Federation and the plastering trade, but those difficulties had been satisfactorily disposed of without involving the industry in any general cessation of work

At this stage the President presented a clock to Mr. E. W. King (Past President) as a token of the esteem of the members of the Federation, and Mr. King briefly responded.

The toast of "The Guests" was proposed by Mr. Stephen Easten, O.B.E., J.P., and responded to by Mr. W. Gilbee Scott, F.R.I.B.A. (President of the Institute of Arbitrators).

Building Developments, Coventry.

Considerable developments in the building of public works are now taking place in Coventry, and among others the following schemes have been approved by the City Council:—Application is to be made to the Ministry of Health for sanction to borrow £100,975 for a public abattoir, with a meat market; for £17,805 for new electric mains; for £24,559 for the improvement of various commons and parks; for £47,333 for the layout of the Hill Farm housing site, and for street and sewer works.

RUBBER FLOORING

A PAPER on this subject was read at a meeting convened by the councils of the Institution of the Rubber Industry and the Rubber Growers' Association, on January 3, by Dr. S. S. Pickles. The lecturer said that with regard to the use of rubber as flooring, in the past expense had been the chief obstacle to its general application. Notwithstanding that very considerable handicap, rubber flooring had maintained its position and popularity solely by reason of its own merits, viz., its unique properties, its adaptability and its durability. We could conveniently take them in the order given above, and consider first the unique or characteristic properties of rubber. Perhaps the most striking of these was its resilience or power of recovery after deformation. As was commonly known, soft vulcanised rubber could be stretched to something like eight times its own length without fracture and recover perfectly. The practical value of that yield and recovery in a floor covering was, first and foremost, its shock-absorbing qualities, exemplified not so much perhaps on those comparative rare occasions when heavy objects were allowed to fall, as in the ever recurrent walking to and fro across a floor. The feeling of increased comfort and well-being which was sensed by everyone on passing from a hard tiled pavement to a rubber-covered floor was largely a subconscious appreciation by the body of the temporary relief from shocks thus afforded.

Closely connected with the shock-absorbing and vibration damping properties of rubber was its quality of comparative noiselessness. Its yielding nature, and its lack of resonance, tended on the one hand to delocalise the effect of an impact blow, and on the other to absorb the vibrations which, in other media, would give rise to sound waves. An interesting instance of the beneficial effect of rubber flooring in improving the acoustic properties of buildings of the orthodox ecclesiastical type had been provided by the Church of St. Michael, Cornhill. After the rubber flooring had been laid there was at once noted the elimination of that confusion of sound which often resulted from the reflection of the sound waves by the hard walls and other surfaces of churches and similar buildings.

The next property to be considered was that of conductivity. In every-day language we should describe rubber as a non-conductor; more accurately we should say that it was one of the poorest conductors known, both of heat and electricity. Since rubber did not conduct heat away rapidly, it felt comparatively warm to the touch, and once a room had been warmed a rubber flooring would retain the heat for a longer period than one made from materials of higher conductivity. It was, therefore, not only a warm and comfortable covering, but conduced also to economy in the use of fuel.

Rubber flooring could be conveniently divided into three main types, differing from one another in their methods of manufacture and the way in which they were laid:—

(1) Separate tiles with straight or curved (interlocking) edges.

(2) Inlaid flooring with multi-colour geometrical patterns, made up on a backing.

(3) Rubber flooring or carpeting made in long lengths.

It was no exaggeration to say that, given a satisfactory sub-floor, rational laying and normal treatment, a decent quality rubber flooring would last a generation even in positions where it was subjected to severe foot traffic and other trying conditions. He had had under close personal observation for nearly twenty years two rubber floors, of ¼ in. thick inlaid tiling, one in a chemical laboratory and another in a power house, both of which were still in excellent condition as regards wear.

In conclusion, a few remarks in reference to the laying and care of rubber flooring would not be out of place. Most of the disappointments and setbacks which had been experienced in connection with the introduction of this type of floor covering were traceable to two main causes—(1) unsuitability or bad conditions of sub-floors, and (2) inexperience or bad practice in laying.

Whether the foundation upon which it was proposed to lay the flooring were of wood or concrete, it was essential that the surface be clean, dry, level and compact. In newly erected buildings, there was much to be said for the policy of "festina lente" in the matter of laying rubber flooring, in order that sufficient time might be allowed for the concrete or floor-boards to become thoroughly dry. Where wood was used as a sub-floor, care should be taken that only well-seasoned timber was employed, otherwise irregularities would be produced owing to warping or shrinkage. Older floors in which there was no danger of moisture or shrinkage, should be well examined for soundness, absence of dry rot, and protruding nails, and before commencing laying operations the surface should be made perfectly level. Provision should also be made for adequate ventilation below wherever possible.

The question of the most suitable adhesive for use in laying rubber flooring was one upon which there was considerable difference of opinion, and while an ideal cement suitable for all circumstances had still to be discovered, for wood floors most manufacturers favoured a solution of rubber in benzene or naphtha—either pure or admixed with resins and pitches. A brief discussion followed the paper.

Mr. Goldsmith said rubber flooring was very successful. He had had slight trouble with dark-coloured examples, but that could easily be put right. It was important to get the right surface on which to lay. He felt it was a pity that rubber manufacturers tried to imitate marble or parquet. Something that expressed the character of the rubber should be employed.

Mr. Alex. Young, Dist. Surveyor of Woolwich, asked whether rubber had been made use of as damp course. Dr. Pickles replied that it had been tried, but he had no information as to its efficiency. He thought it should be very successful.

[A report of the previous paper on "Rubber Roadways," by Lt.-Col. Chapman, appeared in our last issue.]

INDUSTRIAL STATISTICS

THE general implications of industrial statistics for 1928 are discussed in our leading article this week. Below we give a few facts relating to certain aspects of the industrial year.

Changes in Rates of Wages.

The year 1928 was marked by very little change in the rates of wages. In 1927 there was a net decrease in the weekly full-time rates of wages of £388,500, affecting 1,855,000 workpeople, and a net increase of £30,700 in those of 282,000 workpeople. In 1928 there was a net reduction of £163,050 in the weekly full-time wages of 1,608,000 workpeople, and a net increase of £21,150 in those of 212,000 workpeople. The net result was a weekly decrease in 1928 of £141,900, as compared with a net decrease in 1927 of £357,800. It has to be remembered that these figures taken from the *Labour Gazette*, take no account of large sections of the working population, some of them very highly paid. Thus they exclude agricultural labourers, Government employees, shop assistants and clerks, and domestic servants. These classes represent persons at both ends of the scale—agricultural labourers poorly paid and domestic servants paid double pre-war wages, although the increased cost of living falls upon their employers and not upon them.

Hours of Labour.

Hours of labour, on the average, have not been increased, the net result in the year being a reduction of 1,150 weekly hours. Save for the increase in hours of the working day in mines in 1926, hours of labour have maintained a fairly equal level since the widespread reduction in hours in 1919 and 1920 immediately following on the peace.

Cost of Living.

The general level in the cost of living has shown less fluctuation than in any previous year. For food only, the average was 57 per cent. above pre-war level, and for all items 66 per cent. These figures compare respectively with 60 per cent. and 67½ per cent. in the previous year. The rents of working-class dwellings, including rates, subject to control, averaged approximately 51 per cent. above pre-war level; the proportion of houses decontrolled is small, and if such rents were included the percentage of increase in rents would be 52 per cent.

Trade Disputes.

The figures relating to Trade Disputes are the most encouraging contained in the *Gazette*, and reflect credit on both employers and employed. There were 302 disputes, involving 124,000 workpeople, but the working days lost were 1,410,000. Leaving out the black year of the General Strike, the number of working days lost compare with such totals as 34,000,000 in 1919, 26,000,000 in 1920, 85,000,000 in 1921, 19,000,000 in 1922, 10,000,000 in 1923, 8,000,000 in 1924, and 7,000,000 in 1925. (We leave out the thousands and only quote in millions.) In 1927 the loss of working days was 1,170,000.

As the statistics for the last two years show, we have profited by a severe lesson and have given fresh impetus to the machinery of conciliation in industry, and the watchword for the present year appears to be conciliation and concentration.

Employment in the Building Trade.

Employment during December, says the *Ministry of Labour Gazette*, except for a further seasonal decline in the painting and decorating section, showed little variation, on the whole, as compared with the previous month; it remained moderate with skilled craftsmen (other than painters) and generally slack with unskilled workers. As compared with December, 1927, employment was not so good in Scotland, Northern Ireland and the North-Western Counties of England, but was somewhat better in the rest of England and in Wales. As regards individual occupations, employment continued generally moderate with bricklayers and carpenters and joiners; it showed some decline, on the whole, with masons, but was moderate in most districts. There was some improvement with slaters and plumbers, and employment with these classes was generally moderate to fair; it continued to decline with plasterers and was slack. Employment again declined with painters and was bad in most districts; it remained generally slack with tradesmen's labourers. As compared with December, 1927, employment was somewhat worse with plumbers and showed little change with painters and builders' labourers; it was better with all other classes, especially with bricklayers and plasterers.

The Zambesi Bridge, Nyasaland.

It is announced by Mr. Norman B. Dickson, O.B.E., M.I.C.E., the chairman of the Central Africa Railway Company, that plans have been submitted to the Portuguese Government, for their approval, for the erection of the proposed bridge over the Zambesi in Nyasaland, which is the only missing link in the chain of communications from that district to the sea. The consulting engineers to the company are Messrs. Livesey, Son & Henderson, 14, South-place, Finsbury-pavement, E.C.2. The cost of the bridge will be considerably over £1,000,000.

NEW BUILDINGS IN LONDON

The Editor would be glad to receive information for publication under this heading from architects, builders, or other persons concerned.

Cannon-street. — RECONSTRUCTION. — The L.M. and S. Rly. Co. have under consideration the reconstruction of their premises at No. 33.

Clerkenwell.—ADAPTATION.—The "Lyceum" Co., Africa House, Kingsway, W.C., have acquired the premises at No. 66, Goswell-road, E.C., which are to be adapted and equipped for manufacturing purposes.

Commercial-street. —PREMISES. — Tenders are now being invited for the erection of new branch premises at the corner of Commercial-street and Brushfield-street, E.1, for the directors of Barclays Bank, Ltd. The plans have been prepared by Mr. E. C. P. Monson, F.R.I.B.A., Finsbury-pavement House, Moorgate, E.C.2. The quantity surveyors are Messrs. Robinson & Roods, 37, Bedford-row, W.C.

Cricklewood. — REBUILDING. — Plans have been prepared for the partial rebuilding and improvement of the factory in Oatland-road, N.W., of the Industrial Engineering Co. The architects are Messrs. Trant, Brown & Brightiff, 332, High-road, Kilburn, N.W.6.

Croydon.—GARAGES.—Thirty-two garages are to be built in Grange-road for Messrs. Scratchley Bros., 21, Woodville-road.

Croydon.—HOUSES.—Messrs. Thomas & Son, Station-approach, Chipstead, are erecting 34 houses in Biggin Hill, Covington-gardens, and St. Oswald's-road, Croydon.

Croydon. — RECONSTRUCTION. — Plans have been prepared by the Borough Engineer of the Town Council, and tenders are now being invited for reconstruction work at the Central Baths in Scarbrook-road.

Dean-street.—ADDITIONS.—An additional story is being added to the Dean Hotel at the corner of Dean-street and Oxford-street. The builders are Messrs. E. A. Roome & Co., Ltd., 7, Urswick-street, E.9. The steelwork is by Messrs. Drew-Bear, Perks & Co., Ltd., Battersea, S.W.; floors by Messrs. Caxton Floors, Ltd., 16, Caxton-street, S.W.1. The plans have been prepared by Mr. Malc. W. Matts, Staple House, Chancery-lane, W.C.2.

Earl's Court.—FOUNDATIONS.—Tenders are being considered for the construction of the foundations, the first contract, for the new Kensington, Fulham and Chelsea Hospital at the corner of Richmond-road and Finborough road, S.W. The total cost of the building will be £100,000. The architects are Sir Aston Webb & Son, FF.R.I.B.A., of 19, Queen Anne's-gate, S.W.1, and the quantity surveyors are Messrs. Hamilton H. Turner, 19, Queen Anne's-gate, S.W., and George H. Corderoy, 21, Queen Anne's-gate, S.W.

East Ham.—HOUSING.—Negotiations are being carried on by Messrs. J. Stokes & Son, Ltd., 64, High-street, E.6, in connection with a large housing scheme proposed to be carried out on an estate in Roman-road. It is proposed to build 250 small houses.

Finsbury-square.—ALTERATIONS.—The Westminster Bank, Ltd., have decided to carry out alterations to their branch premises at the corner of Finsbury-square and Chiswell-street, E.C. The contract has been placed with Messrs. Higgs & Hill, Ltd., of Crown Works, South Lambeth-road, S.W. The plans have been prepared by Messrs. Joseph, 2, Paul's Bakehouse-court, Godliman-street, E.C.4.

Gresham-street.—IMPROVEMENTS.—A contract is to be placed for the fitting up of the first floor of Leith House as offices for the City of London Corporation. The plans have been prepared by Mr. Sydney Perks, F.R.I.B.A., City Architect and Surveyor.

Hackney.—BUILDING.—A warehouse is to be erected at the Ashgrove works, E., for Messrs. Burt & Co. The contract has been secured by Mr. Horace V. Clogg, Vallance Works, 159, Hanbury-street, E.1. The plans have been prepared by Messrs. John Hamilton & Son, 23, Wormwood-street, E.C.2.

Highbury.—FLATS.—Forty flats are to be constructed on a site in Avenell-road, Highbury, for the Islington Borough Council. Tenders are now being invited to the plans of Mr. E. C. P. Monson, F.R.I.B.A., of Finsbury-pavement House, Moorgate, E.C.2.

Highgate.—SHOPS.—A large block of shops and flats are to be erected on a site in Swain's-lane, N., at a cost of about £7,000. The building has been designed by Mr. M. K. Matthews, 72, Tottenham Court-road, W.1. The builder is Mr. E. C. Matthews, 82, Highgate-road, N.8.

Lambeth-road.—ADDITIONS.—Messrs. E. A. Roome & Co., Ltd., of Hackney, are erecting an additional wing to Archbishop Temple's Boys' School at Lambeth-road, S.E., under the supervision of Messrs. Chas. P. Whiteley & Sons, F.S.I., of 79, Queen-street, London, E.C.4.

Lea Bridge.—STORES.—New departmental stores and showrooms are to be built in Lea Bridge-road, E., by the London Co-operative Society, Ltd., Maryland-road, E.15. The work will be carried out by the Society's Building Department.

Leadenhall-street.—BUILDING.—The Bankside Investment Trust, Ltd., have acquired the large site at Nos. 107-109, where an office building is to be built. The premises will be erected by direct labour, under the direction of Mr. F. Bailey, engineering director, 64, Bankside, S.E.1, who has prepared the plans in conjunction with Mr. Bernard Dicksee, F.R.I.B.A., 22, Portman-street, W.1.

Merton.—PREMISES.—A new off-licence is to be erected at the junction of Kenley-road and Morden-road for Messrs. Charrington & Company, Mile End, E.1. The builders are Messrs. G. Godson & Sons, Ltd., Pembroke Works, Kilburn-lane, W.10. The architect is Mr. Nowell Parr, F.R.I.B.A., 42, Cranley-gardens, South Kensington, S.W.7.

New Bond-street.—REBUILDING.—It is proposed to carry out the demolition and rebuilding of the premises at No. 81. The plans have been prepared by Messrs. Claude W. Ferrier, F.R.I.B.A., and Mr. W. B. Binnie, R.I.B.A., of 4, Pickering-place, S.W.1. The quantity surveyors are Messrs. George Corderoy & Company, 21, Queen Anne's-gate, S.W.1.

Norwood.—LIBRARY.—A scheme for a new library has now developed a stage further by application being made to the Ministry of Health by the Croydon Council for the sanction of £16,000 and the inviting of tenders for the work. The site is at the London-road corner of Beatrice-avenue, Norbury.

Queen's-road.—FLATS.—The old buildings at Nos. 73-77 are to be demolished, and a block of shops and flats will be erected. The plans have been prepared by Mr. Ernest G. Cole, 79, Grosvenor-street, W.1.

Stepney. — REBUILDING. — Messrs. Whitbread & Co., Ltd., are rebuilding the "Crown" public-house, 172, Cable-street, Stepney, E.

Walworth.—DWELLINGS.—Mr. E. Percy Kendall, architect, 22, Fairfax House, Fulwood-place, W.C.1, has prepared plans for the erection of eight blocks of dwellings, containing about 150 flats and shops, in East-street, Walworth, S.E., for the James Hartnoll Estates, Ltd.

Wood Green.—EXTENSION.—A contract for the extension of the Billiards Hall in Wood Green High-street, N.22, for the Temperance Billiards Halls, Ltd., has been placed with Messrs. Stevens & Sons, 14, Muswell Hill-road, Highgate, N. The steelwork is being supplied by Messrs. Aston Construction Co., Ltd., Eagle Wharf-road, Hoxton, N. The architects are Messrs. George Spencer & Co., 79, Gresham-street, E.C.2.

THE WEEK IN PARLIAMENT

WESTMINSTER, Wednesday.

Parliament reassembled on Tuesday, January 22.

The Channel Tunnel.

Mr. Baldwin informed Mr. Thurtle that, in view of the wide public interest in the Channel Tunnel project, the Government had come to the conclusion that the time was ripe for a comprehensive re-examination of the question. The Government were anxious that a very thorough examination should be made of the economic aspects of the matter, in order that those might be weighed with Imperial Defence considerations, and a decision reached on broad grounds of national policy. In view of the time that would be required to carry the project through all its stages to the completion of the tunnel, they were convinced that it would be in the public interest, if possible, to deal with this important question outside of the Party atmosphere and by agreement, so that the decision of one Government might not be upset by another. If the course adopted by Mr. MacDonald in 1924 should again commend itself to him and to Mr. Lloyd George, he would like to proceed on similar lines, but obtaining their co-operation from the outset of the inquiry.

Slum Clearances.

Sir Kingsley Wood informed Lt.-Commander Kenworthy that between April 1, 1925, and December 31, 1928, 8,540 buildings had been acquired for demolition, 6,002 buildings had been demolished and 6,949 new dwellings had been erected in connection with slum clearance schemes. It was estimated that approximately 31,000 persons had been rehoused in those new dwellings.

Housing in London.

Mr. Broad asked the Minister of Health whether, seeing that out of the 28 Metropolitan borough councils, in the year 1926, 22 contributed either nothing or less than a farthing rate to clearance schemes or new buildings, he was prepared to use his powers to induce these councils to meet their responsibilities. Southwark, with a last census overcrowded population of 41,574 living more than two to a room; Paddington, with 20,236 living more than two to a room, and St. Marylebone, with 16,159 living more than two to a room, had built no houses under any of the Housing Acts since 1920, and that the borough of Stoke Newington, with an overcrowded population of 4,137 living more than two to a room, had built no houses under the Housing Acts since 1922.

Mr. Chamberlain said that he did not think it was practicable in London to divorce the work of the County Council and the Metropolitan Borough Councils quite as the hon. member proposed. The Housing Acts provided both as regarded slum clearance and new house provision for co-operation between the borough councils and the county council. As regarded provision of new houses, many of the borough councils were limited by the amount of land available for development, and, in view of section 80 of the Act of 1925, they had no power to provide houses outside their own areas. The section contemplated that schemes which might serve the purposes of more than one borough should be undertaken by the county council. He was satisfied that the steps taken by the Housing Committee of the County Council had resulted in a large measure of co-operation between them and the borough councils, and under arrangements made between the authorities considerable numbers of houses provided in County Council schemes had been earmarked under contributory arrangements to inhabitants of Paddington, Southwark, Stoke Newington and St. Marylebone.

RATES OF WAGES IN THE BUILDING TRADE

[Every endeavour is made to ensure accuracy but we cannot be responsible for errors.]

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Accrington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Aldershot	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Alfreton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Alnwick	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Altrincham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Ashford Kent	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Ashington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Ashton-under-Lyne	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Aylesbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Aylsham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Banbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Barnsley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Barnstaple	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Barrow-in-Furness	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Barry	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Basingstoke	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bath	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bedford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Berwick	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bexhill	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Birkenhead	1/10	1/10	1/10	1/11	1/10	1/10	1/9½	1/4½
Birmingham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bishop Auckland	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Blackburn	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Blackpool	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bolton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bournemouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bradford	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bradford-on-Avon	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Braintree	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Brentwood	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bridgwater	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bridlington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Brighton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bristol	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bromsgrove	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bromyard	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bungay	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Burnley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Burton-on-Trent	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bury	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Buxton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Cambridge	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Canterbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Cardiff	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Carlisle	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chatham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Chelmsford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Cheltenham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chesterfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chorley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Cirencester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Clacton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Colchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Coventry	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Cranbrook	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Crewe	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cromer	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Darlington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Deal	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Denbigh	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Derby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Devizes	1/4	1/4	1/4	1/4	1/4	1/3	1/0	1/0
Dewsbury	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Doncaster	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Dorchester	1/4	1/4	1/4	1/4	1/4	1/3	1/0	1/0
Dorking	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Dovercourt	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Driffield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Droitwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Dudley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Durham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Eastbourne	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
E. Glam. (Mon. Val.)	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ely	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Exeter	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/5½	1/2
Exmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Fakenham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Felixstowe	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Folkestone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Frome	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Glossop	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Gloucester	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Godalming	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Goole	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Gosport	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Grantham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Great Yarmouth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Grimsby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Guildford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Halifax	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Harpenden	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Harrogate	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Hartlepools	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Harwich	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hastings	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hatfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hednesford	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Hereford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/4½	1/1½
Herne Bay	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Hertford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hitchin	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hoddesdon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Holt	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Huddersfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Hull	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Hunstanton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Huntingdon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Isle of Wight	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Ipswich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Keighley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Kettering	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kidderminster	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
King's Lynn	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Lancaster	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leamington Spa	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leeds	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leicester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leighton-Buzzard	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Lichfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Lincoln	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Littlehampton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Liverpool	1/10	1/10	1/10	1/11	1/10	1/10	1/9½	1/4½
Llandudno	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Llanelly	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
London:								
12 m. radius	1/9	1/9	1/9	1/9*	1/9	1/9	1/8	1/4
12-15 m. radius	1/8½	1/8½	1/8½	1/8½*	1/8½	1/8½	1/7½	1/3½
Loughborough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Lowestoft	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Luton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Macclesfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Maidstone	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Malvern	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Manchester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Mansfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Margate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Market Harb'rough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Matlock	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Melton Constable	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Melton Mowbray	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Merthyr Tydfil	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Middlesbrough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Newark	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Newbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Newcastle-on-Tyne	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Newcastle-ur-Lyme	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
New Forest	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newmarket	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newport, Mon.	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Northampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Norwich	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Nottingham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Nuneaton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Oakham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Oldham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Oxford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Paignton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Peterborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Plymouth	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2½
Pontypridd	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Portsmouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Preston	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Ramsgate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Reading	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Redcar	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Redditch	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Reigate	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Retford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ripon	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Rochdale	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Rochester	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Rugby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Saffron Walden	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½
St. Albans	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
St. Helens	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Sawbridgeworth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Saxmundham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Scarborough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Sevenoaks	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Sheffield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Shrewsbury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sittingbourne	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Southampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Southend-on-Sea	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Southport	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
South Shields	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stevenage	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Stockport	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stockton-on-Tees	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stoke-on-Trent	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stourbridge	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stourport	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stowmarket	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Stratford-on-Avon	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stroud	1/5	1/5	1/5	1/5	1/5	1/5	1/4½	1/0½
Sunderland	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Swaffham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Swansea	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Swindon	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/4½	1/1½
Tamworth	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Taunton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Thetford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Torquay	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Totnes	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Trowbridge	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Tunbridge Wells	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Uttoxeter	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wakefield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Walsall	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wallsend	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Warminster	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Warrington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Warwick	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Wells (Norfolk)	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Welwyn Gar. City	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
West Bromwich	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Weston-sup.-Mare	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Weymouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Whitby	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Wigan	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Winchester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Windsor	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wisbech	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Wolverhampton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Woodbridge	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Worcester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Worksop	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Worthing	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wrexham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wroxham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Wymondham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
York	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½

* The rate recognised by the National Association of Plasterers, Granolithic and Cement Workers, is 1/11½ per hour.

For Building Trades wages in Scotland, see page 269.

NEW CINEMAS

Birmingham.—The contract for the proposed cinema in New-street—see our issue of September 14—to hold about 2,000, has been placed with Messrs. M. J. Gleeson and Co., Ltd., of Sheffield. Operations are about to commence. The plans have been prepared by Mr. F. C. Mitchell, L.R.I.B.A., 80, George-street, Portman-square, W.1.

Brighton.—A £100,000 contract for the erection of the cinema on the site of the old Brills' Baths, for the Savoy Cinemas, Ltd., of London, has been awarded to Messrs. M. J. Gleeson and Co., Ltd., of Sheffield. The cinema, which will seat 2,700, and will have a 500-car capacity garage under the auditorium, has had plans prepared—as announced in our issue for August 10—by Mr. F. C. Mitchell, L.R.I.B.A., 80, George-street, Portman-square, W. A hotel and restaurant are included in the scheme.

Hinckley.—Plans have been passed by the U.D.C. for the proposed combined theatre and cinema to hold 1,000 persons.

Hunstanton.—A new picture theatre is to be built, work on the site commencing next month, with a capacity for nearly 1,000 persons. The plans for the building have been prepared by Messrs. Allflatt and Courtney, A.F.A.S., Hill House, Tuesday Market-place, King's Lynn.

Islington.—The building contract for the erection of the large picture theatre at Seven Sisters-road and Isledon-road, N.4, for the Picture House Trust, Ltd.—details of which were first given in our issue of December 7, 1928—has been placed with Messrs. Griggs & Son, 100, Victoria-street, S.W.1. The plans, which provide for a building to seat 4,000, with restaurant and dance hall attached, have been prepared by Mr. Edward A. Stone, F.S.I., 20, Berkeley-street, W.1.

Manchester.—The Corporation has passed plans for a cinema and shops at the junction of Kingsway and Green End-road, Burnage, for Mr. J. Buckley, of Park-road, Timperley. The architect is Mr. H. Hankinson, P.A.S.I., 2, Astley-road, Altrincham. The contract has been awarded to Messrs. J. E. Armstrong & Co., Ltd., of Manchester.

Manchester.—Mr. John Baum, proprietor of the Varley-street cinema, Miles Platting, Manchester, is proposing to make alterations to the premises. The plans have been prepared by Messrs. E. Ogden & Co., architects, 1, Ridgefield, King-street, Manchester, which provide for the conversion of the temporary building into a permanent cinema.

Newcastle-on-Tyne.—A site in Scrogg-road has been secured by the Playhouse, Ltd., for the erection of a super-cinema and theatre. The architect is Mr. James N. Fatkin, L.R.I.B.A., 77, Westgate-road, Newcastle-on-Tyne.

Newport (Mon).—Plans for a super-cinema at Austin Friars, for Messrs. Tilney Bros., have been passed by the Corporation.

Richmond.—Mr. A. E. Abrahams, of the Regal Cinema at Marble Arch, has deposited plans for the erection of a large cinema at Bridge-street. The building will include a large restaurant. The plans have been prepared by Mr. Clifford Aish, 22, Bedford-street, W.C.

Ruislip.—A cinema to seat about 700 persons, with balcony, is to be erected at the corner of the High-street and the Ickenham-road. There will be a completely equipped stage, with dressing rooms. The builder is Mr. A. Woodley, of Amersham, and plans have been prepared by Mr. F. C. Mitchell, L.R.I.B.A., 80, George-street, Portman-square, W. Sub-contracts have not yet been placed.

Slough.—Quantities for the proposed new cinema at Bath-road are being taken out by Mr. A. B. Russell Taylor, of 48, Baker-street, W.1. Mr. Taylor's address was given in error last week as Gerrard's Cross. The architect for this scheme is Mr. E. Norman Bailey, of Gerrard's Cross, and the cinema will cost between £30,000 and £40,000.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A.; Surveyor, S.; Engineer, E.; Borough Architect, B.A.; Architect, A.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

FEBRUARY 4.

Ampthill.—Wiring.—Electric wiring and fittings for heating boardroom at Poor Law Institution, for B.G. L. Foster, S., Flitwick, Bedford.

Chelmsford.—Sheds.—Lime and cement sheds at railway siding, New-st., for Wray & Fuller. W. Chancellor, F.R.I.B.A., 19, Duke-st.

Chertsey.—Cottages.—12 three-bedroom cottages, in blocks of four, on Bowling Green site, near Hennage-corner, Burrow-hill, Chobham, for R.D.C. Capt. H. Beeney, S.

Dundee.—Additions.—To slaughter houses, for T.C. G. Baxter, City E., 91, Commercial-st.

Gateshead.—Flats.—32 two-apartment flats on land adjoining Johnson-st., for C.B. F. H. Patterson, B.E.

Godalming.—Improvement.—Also repair to Old Town Hall, for T.C. G. B. Hartfree, B.S.

Halifax.—Houses.—64, on Moon End-rd. site, for C.B. A. C. Tipple, B.E., Crossley-st. Dep. £2 2s.

Leeds.—Washhouse, at Kirkstall-rd. baths, for T.C. W. T. Lancashire, City E.

Leeds.—Wiring.—Electric wiring, etc., to mining section of the University in Woodhouse-lane, for University. Lanchester & Lodge, architects, 19, Bedford-sq., London, W.C.1. Dep. £1 1s.

Leek.—Offices.—Provision of additional office accommodation for accountant's department, at Town Hall, for U.D.C. W. E. Beacham, S.

London.—Heating.—Wiring and fittings for electric lighting, heating and cooking in one block of dwellings consisting of some 86 tenements and administrative quarters on Ossulston estate, St. Pancras, the installation comprising some 999 wiring points, for L.C.C. Chief Engineer, The Old County Hall, Spring-gardens, S.W.1. Dep. £1.

Maidenhead.—Bedrooms.—Three bedrooms in roof space of present nurses' quarters adjoining infirmary at Poor Law Institution, for B.G. T. W. Stuchbery, clerk, 1, Park-st.

Stockton-on-Tees.—Flat.—Housing Office and flat on Blue Hall estate, Norton, for T.C. Messrs. Hays & Gray, FF.R.I.B.A., Wingate, Co. Durham.

York.—Houses.—29 non-parlour and 2 parlour houses adjoining Fifth-av., for T.C. F. W. Spurr, City E. Dep. £2 2s.

FEBRUARY 5.

Cambridge.—Pavilion.—New sports pavilion on Parker's-piece, for T.C. G. W. Teasdale, B.S. Dep. £2 2s.

Coseley.—Conversions.—In connection with privy conversions, for U.D.C. G. E. Mitchell, S.

Dumbarton.—Buildings.—New piggery and roof on existing byre-buildings, at Dumbarton Combination Poorhouse, for Poorhouse Combination. Balfour & Stewart, architects, 110, Blythswood-st., Blythswood-sq.

Ireland.—Enlargements.—Of (1) Banagher National school, Co. Mayo, and (2) Ballymahon National school, Co. Longford, for Commissioners of Public Works. T. Cassedy, secretary, Office of Public Works, Dublin. Dep. £1 each.

Kirkcudbright.—Houses.—8 blocks of 2 houses on Common housing site, for T.C. W. A. Mackinnell, architect, Town Hall.

Portlaoighise.—School.—New Technical School for Laoighis County Committee of Agriculture and Technical Instruction. Vincent Kelly, architect, 4, Grafton-st., Dublin. Dep. £2 2s.

Settle.—Building.—New sanatorium at Giggleswick school. Austin & Paley, architects, Castle Park, Lancaster.

Shrewsbury.—Houses.—12, in Monkmoor-rd., for T.C. A. W. Ward, B.S., Dep. £1 1s.

Stroud (Glos.).—Houses.—Erection of 20 alternative tenders required for brick and reinforced concrete, for the Stroud U.D.C. Frank S. Cutler, Engineer and Surveyor, Stroud. Dep. £5.

Tallaght.—Station.—Station, for Garda Siochana, for Commissioners of Public Works. T. Cassedy, secretary, Office of Public Works, Dublin. Dep. £1.

Tullamore.—Houses.—Nine at Tullamore, Offaly, for U.D.C. T. F. McNamara & Sons, architects, 5, Dawson-st., Dublin.

Wenlock.—Houses.—Three pairs of parlour-type houses on Southfield-rd. building estate, for T.C. Geo. Riley & Son, architects, Wellington.

FEBRUARY 6.

Abram.—Houses.—33 non-parlour type in Crankwood-rd., for U.D.C. Surveyor. Dep. £2 2s.

Caernarvon.—Additions.—Alterations and additions to "Carmel Infants' School." Westbury Lloyd Jones, County Architect, 14, Market-st., Caernarvon.

Chelmsford.—Additions.—Roofed, pig pens, a shed for workmen, auctioneers' offices, cattle sheds, a kiosk, with other works, for T.C. E. J. Miles, B.E. and S. Dep. £1 1s.

Dorchester.—Houses.—12 pairs of bungalow-type houses at St. George's-rd., for T.C. B.S., 21, North-sq.

Grimsby.—Alterations.—To gentlemen's convenience at Grant Thorold Park, for Corporation. H. G. Whyatt, B.E., 170, Victoria-st.

King's Lynn.—Houses.—54 non-parlour type, for T.C. J. C. Matthew, B.E. Dep. £2 2s.

Morecambe.—Shelter.—On promenade opposite West End-rd., for T.C. B.S. Dep. £2 2s.

***Northwood.**—Houses.—Erection of 30 in Breakspear-rd., Ruislip, for the Northwood and Ruislip U.D.C. H. R. Metcalfe, A.Inst.C.E., E. and S., Council Offices, Northwood. Dep. £2 2s.

Rochdale.—Painting.—Internal, required to 100 houses on the Turf-hill estate, for C.B. B.S.

Stafford.—Extensions.—At Girls' High School, Lichfield-rd., for Staffordshire E.C. F. A. Hughes, Director of Education, Stafford.

Twickenham.—Conveniences.—Public conveniences and sports shelter at Cambridge-gardens pleasure ground, Clevedon-rd., for T.C. B.E. and S. Dep. £2 2s.

FEBRUARY 7.

Dodworth.—Mortuary.—At Council's store shed, Green-rd., for U.D.C. S.

Dorchester.—Cottages.—4, at Stratton, near Dorchester, for R.D.C. F. T. Maltby L.R.I.B.A., chartered architect, Dorchester.

Glasgow.—Installation.—In connection with electric lighting installation at Shettleston baths, for T.C. D. Stenhouse, T.C. Dep. £3 3s.

Glasgow.—Houses.—Housing scheme at Altyre-st., comprising 138 houses, for T.C. D. Stenhouse, T.C.

London.—Flats.—Erection of 40, on a site in Avenell-rd., Highbury, N.5, for the Metropolitan Borough Council of Islington. E. C. P. Monson, F.R.I.B.A., Council's Architect, Finsbury Pavement House, 120, Moorgate, E.C.2. Dep. £3.

London.—Lighting.—Wiring and fittings for electric lighting at the Coroner's Court, Bethnal Green, and Weights and Measures Office and Coroner's Court, Clapham, the installations comprising about 80 wiring points, for L.C.C. Chief Engineer, The Old County Hall, Spring Gardens, S.W.1. Dep. £1.

London.—Painting.—Cleaning and repainting station buildings, etc., at Corsham, Box, etc.; Staverton Holt Junction, etc.; Bristol West Depot, Clifton Bridge, etc., for G.W.R. Company's Engineer, Bristol.

London.—Repairs to Chimney Stacks.—At the various establishments of the Stepney Board of Guardians. S. McClelland, Clerk, Administrative Offices, Bancroft-rd., Mile End, E.1. Dep. £1. (Cheques payable to the Treasurer).

Newcastle-upon-Tyne.—Houses.—166 brick houses on section "B" of Two Ball Lonnen estate, for T.C. Housing Architect, 18, Cloth Market, Newcastle. Dep. £2 2s.

Portsmouth.—Houses.—216, on Gladys-av. site Stamshaw, for T.C. R. J. Jenkins, City E. Dep. £5 5s.

Tonteg.—Improvements.—Construction of a loop line near Tonteg Halt on Llantrisant Branch, Taff Vale Section, for G.W.R. Engineer at Paddington Station, W.C.2. Dep. £2 2s.

FEBRUARY 8.

Aldershot.—Football Stand.—Erection of a steel-framed stand, to be erected in the Recreation Ground, High-st., Aldershot, for the T.C. Borough Surveyor's Office, Municipal-buildings, Aldershot.

Boxhill.—Reroofing.—Stripping and reroofing the oxide shed at gasworks, Ashdown-rd., for T.C. G. Ball, B.S. Dep. £1 1s.

Brentford and Chiswick.—Works and Materials.—Execution of works, and the supply of materials, for a period of 12 months, commencing April 1, 1929, for the Brentford and Chiswick U.D.C. Edward Willis, M.Inst.C.E., F.S.I., Engineer and Surveyor, Town Hall, Chiswick, W.4.

Croydon.—Baths.—Reconstruction of and additions to slipper baths, boiler house, laundry and superintendent's quarters, etc., at the Central Baths, Scarbrook-rd., for Croydon C.B. Council. Borough Engineer, Town Hall, Croydon. Dep. £5 5s.

Kilconla.—House.—House and out-office on land of Blindwell, parish of Kilconla, Tuam, Co. Galway, for Irish Land Commission. J. T. Drennan, secretary, Upper Merrion-st., Dublin. Dep. £1.

Leeds.—Improvements.—For (1) re-installation of electric light, children's block at Rothwell Institution, Rothwell, near Leeds; (2) fitting of casement windows at children's block Rothwell Institution, Rothwell, near Leeds; (3) erection of verandah to engineer's house, Hill End-rd., Armley, Leeds; and (4) reslating girls' home, Hill End-rd., Armley, Leeds, for B.G. J. H. Ford, clerk, 11, South-parade.

Rotherham.—Painting.—Internal of tramcar depot at Rawmarsh-rd., for Corporation. Tramways Manager, Municipal-buildings, Howard-st.

Warwick.—Houses.—For (1) 8 houses at Cubbington; (2) 8 houses at Whitnash, for R.D.C. K. Rayner, 4, The Parade, Leamington Spa.

FEBRUARY 9.

Barnet.—Nurses' Home.—Erection of a nurses' home at the Isolation Hospital, Mays-lane, Barnet, Herts, for the Barnet Isolation Hospital Com-

mittee. Simmons & Cutbush, Palace-chambers, Bridge-street, Westminster, S.W.1. Dep. £2 2s.

Eastbourne.—Improvements.—For (1) reinforced concrete floors; (2) steam and hot air apparatus; (3) mahogany revolving doors and ticket counter; (4) terrazzo paving, to proposed Turkish baths, for C.B. L. Roseveare, B.E. Dep. £2 2s.

Enfield.—Refreshment Pavilion.—Erection of, in the Town Park, Enfield, Middlesex, for the Enfield U.D.C. H. R. Crabb, E. and S., Public Offices, Enfield, Middlesex.

Huntly.—Houses.—4 blocks of 4 3-apartment houses, East Park-st. site, for T.C. Thos. S. Hutson, B.S.

Padstow.—Houses.—6 parlour-type, for U.D.C. G. H. Reed, Architect's Office. Dep. £2 2s.

FEBRUARY 11.

Burnley.—Bandstand.—In Townley Park, for T.C. B.E. and S.

Ely.—Houses.—25, on new Barnes housing site, for U.D.C. G. A. J. Edmundson, architect and surveyor, Silver-st. Dep. £1 1s.

Glasgow.—Building.—Observation ward at Belvedere Hospital, for T.C. D. Stenhouse, T.C.

Leighton Buzzard.—Sewerage Disposal Works.—Alterations and additions, execution of various constructional works in connection with above scheme, for the Leighton Buzzard U.D.C. B. H. Robjant, S., Council Offices. Dep. £2 2s.

Markinch.—Houses.—20, for T.C. A. D. Haxton, architect, 3, High-st., Leven.

Port St. Mary (I. of M.).—Dwellings.—6 workmen's dwellings, for Port St. Mary Village Commissioners. G. Kay & Sons, architects, 22, Athol-st., Douglas.

Rothwell.—Houses.—34 scullery houses, for U.D.C. J. Southwart, S. Dep. £1 1s.

St. Helens (I. of W.).—Conveniences.—At Puckpool Battery, for U.D.C. L. F. Phillips, clerk, Alexandra-rd., High Park, Ryde, I.W.

Sharnford.—Alterations.—To Church of England school. Architect, County Education Office, Grey Friars, Leicester. Dep. £2 2s.

Thorne.—Houses.—12, at Hatfield, and 36 at Thorne, for R.D.C. H. Plewes, S. Dep. £2 2s.

FEBRUARY 12.

Bentley.—School.—Removal of temporary school building from Bentley-rd., Bentley, to Goole-rd., Thorne, and re-erecting same, together with additional conveniences and fences, for West Riding E.C. Education Department, County Hall, Wakefield.

Essex.—Secondary School.—Erection of Palmer's endowed proposed new Secondary School for Girls, Grays, for the Essex Education Committee. Jno. Stuart, F.R.I.B.A., County Architect, Springfield Old Court, Chelmsford. Dep. £2 2s., to F. H. Owers, County Accountant, Duke-st., Chelmsford.

Greasbrough.—Conversion.—Of privies to water closets in Scrooby-st., Potter-hill, and adjoining streets, for U.D.C. J. H. Jackson, clerk. Dep. £2.

Guildford.—Telephone Exchange.—Erection of, at Shere, Guildford, for the Commissioners, H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Hatfield.—School.—Removal of temporary school buildings from Thurcroft to Doncaster-rd., Hatfield, re-erecting same, together with conveniences, fences, etc., for West Riding E.C. Education Department, County Hall, Wakefield.

Middleton.—Pavilion.—Gymnasium and sports pavilion in connection with Middleton Queen Elizabeth's Grammar school, for Lancashire E.C. Stephen Wilkinson, F.R.I.B.A., County Architect, 16, Ribblesdale-place, Preston. Dep. £2.

Nettingham.—School.—Secondary school for girls, Gregory-boulevard, for T.C. T. Wallis Gordon, City E. and S. Dep. £2.

Rivington.—Extensions.—Alterations and extensions of Rivington and Blackrod Grammar school, for Lancashire E.C. Stephen Wilkinson, F.R.I.B.A., County Architect, 16, Ribblesdale-place, Preston. Dep. £2.

Stocksbridge.—House.—Caretaker's house at Stocksbridge New school, for West Riding E.C. Education Department, County Hall, Wakefield.

FEBRUARY 13.

Darlington.—School.—Adjoining existing North-rd. Council school, for C.B. E. Minors, B.S. Dep. £1 1s.

Dublin.—Plastering, etc.—At Custom House, for Commissioners of Public Works. T. Cassedy, secretary, Office of Public Works. Dep. £1.

Leicester.—Telephone Exchanges.—(1) Evington, (2) Belgrave, and (3) Stoneygate Telephone Exchanges, for the Commissioners, H.M.O.W. Contracts Branch, King Charles-st., Westminster, S.W.1. Dep. £1 1s. in each case.

Skegness.—Alteration.—To ladies' and gentlemen's conveniences at Tower Gardens Pavilion, for U.D.C. Surveyor.

FEBRUARY 14.

Belfast.—Masonry.—Delivery and working of a portion of the masonry required for the erection of the new Law Courts, etc., Belfast, for the Commissioners, H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Eton.—Additions.—Also alterations to sanitary accommodation at Workhouse, at Slough, for B.G. H. J. Stribling, A.R.I.B.A., 65 and 67, High-st., Slough. Dep. £1.

Leitrim.—Extension.—Of Kiltyglogher R.C. church, Co. Leitrim. Jas. Donnelly, architect, Enniskillen. Dep. £2 2s.

Liverpool.—Shelters.—Tramway passenger shelters at Walton-vale and Scotland-rd., for T.C. General Manager, Liverpool Corporation Tramways, 24, Hatton-garden, Liverpool.

Newton-le-Makerfield.—School.—Secondary school, for Lancashire E.C. Stephen Wilkinson, F.R.I.B.A., County Architect, 16, Ribblesdale-place, Preston. Dep. £2.

FEBRUARY 15.

Bexhill-on-Sea.—Heating.—Low-pressure hot water heating at Post Office, for H.M.O.W. Contracts Branch, H.M. Office of Works, King Charles-st., S.W.1. Dep. £1 1s.

***Hounslow.**—Houses.—Erection of 126 non-parlour type houses on the Sutton-lane estate, Hounslow, for the Heston and Isleworth U.D.C. J. G. Carey, A.M.Inst.C.E., Council House, Hounslow. Dep. £2 2s.

FEBRUARY 20.

***Richmond, Surrey.**—New Convenience.—Construction of, at Kew Bridge, together with certain demolition and reconstruction works, for the Richmond B.C. Borough Engineer and Surveyor, Town Hall, Richmond, Surrey. Dep. £1 1s.

FEBRUARY 27.

***Portsmouth.**—Secondary Schools.—Erection of (for boys and girls), North End, Portsmouth, for the City of Portsmouth Local Education Authority. Adrien J. Sharp, Authority's Architect, Edu. Dept., the Guildhall, Portsmouth. Dep. £5 5s.

NO DATE.

Belfast.—Conversion.—Of 5, 7, 9 and 11, Shaftesbury-sq. into business premises, for J. Morton. T. W. Henry, F.R.I.B.A., charteder architect, 16, Donegall-sq., South Belfast. Dep. £1 1s.

Ruislip.—Painting.—External of 22 houses, known as Manor Cottages, Chestnut-av., Northwood, and 11 houses in Manor-close, Manor-way, Ruislip, for Ruislip Manor Cottages Society, Ltd. H. C. Moore, secretary, Estate Office, Met. Railway-bridge, Ruislip.

MATERIALS, etc.

FEBRUARY 4.

Bridgwater.—Road Materials.—For T.C. H. P. Bishop, B.E. and S.

Chatham.—Road Materials.—For T.C. R. L Honey, B.E. and S.

Croydon.—Road Materials.—For C.B. Borough Road Surveyor.

Dublin.—Builder's Materials.—For C.B. Supplies Department, Lord Edward-st.

Hendon.—Highway Materials.—For U.D.C. A. O. Knight, E. and S.

Ilford.—Builder's Materials.—For T.C. H. Shaw, B.E. and S.

London.—Road Materials.—For Hampstead B.C. A. P. Johnson, T.C.

London.—Road Materials.—For Kensington B.C. H. Rapson, T.C.

Melton Mowbray.—Road Materials.—For U.D.C. W. H. Jarvis, S., Corn Exchange.

Surrey.—Granite Chippings.—For C.C. W. P. Robinson, C.E. and S.

FEBRUARY 5.

Belfast.—Builder's Materials.—For C.B. R. B. Donald, City S.

Carmarthenshire.—Road Materials.—D. S. Samuel, C.S.

Cheshunt.—Highway Materials.—For U.D.C. J. E. Sharpe, E. and S.

Chingford.—Road Materials.—For U.D.C. E. and S.

London.—Builder's Materials.—For Holborn B.C. J. E. Parr, B.S.

Uckfield.—Road Materials.—For U.D.C. G. E. Hart, clerk.

Wing.—Road Materials.—For R.D.C. A. H. Bowyer, S., 60, New-rd., Linslade, Leighton Buzzard.

FEBRUARY 6.

Belfast.—Builders' Materials.—For Belfast and County Down Railway. H. E. Mellor, secretary, Queen's Quay Terminus, Belfast.

Easthampstead.—Highway Materials.—Highway S.

Huntingdonshire.—Road Materials.—For C.C. H. Leete, C.S.

London.—Road Materials.—For H.M.O.W. Contracts Branch, H.M. Office of Works, King Charles-st., S.W.1.

London.—Builders' Materials, etc.—For Hammersmith B.C. B.E. and S.

London.—Pipes, etc.—For M.W.B. Chief Engineer, 173, Rosebery-av., Clerkenwell, E.C.1.

Mitcham.—Lime, etc.—For Wandle Valley Joint Sewerage Board. Surveyor to Board, Lower Green, Mitcham.

Portsmouth.—Builder's Materials.—For Tramways Committee. General Manager and Engineer.

Stratford-upon-Avon.—Highway Materials.—For T.C. F. W. Jones, B.E.

Warwickshire.—Road Materials.—For C.C. D. H. Brown, C.S., 8, Northgate-st., Warwick.

Welwyn Garden City.—Road Materials.—For U.D.C. W. E. James, S.

Wood Green.—Road Materials.—For U.D.C. E. and S.

FEBRUARY 7.

Escrick.—Highway Materials.—For R.D.C. J. R. Hudson, surveyor, "Ashdene," Dunnington.

North Riding of Yorkshire.—Highways Materials.—For C.C. C.S., Northallerton.

Penge.—Highway Materials.—For U.D.C. S.

Stockport.—Highway Materials.—For C.B. H. Hamer, B.S., Town Hall, Stockport.

Trowbridge.—Highway Materials. For U.D.C. G. W. J. Clark, E. and S.

FEBRUARY 8.

Fleetwood.—Granite Chippings.—For U.D.C. E. and S.

Sutton and Cheam.—Road Materials.—For U.D.C. H. Bolton, clerk.

FEBRUARY 9.

Belfast.—Builders' Materials, etc.—For L.M. & S. Rly. Co. (Ireland). F. J. Martin, Stores Superintendent, York-rd. Station, Belfast.

Cramlington.—Roadstone.—For U.D.C. S.

Dagenham.—Builder's Materials.—For U.D.C. T. P. Francis, E.

Darlington.—Builder's Materials.—For R.D.C. S.

Kent.—Tar, etc.—For C.C. H. T. Chapman, C.S.

Lexden and Winstree.—Road Materials.—For R.D.C. W. H. Filer, S., 1, Victoria-chambers, Colchester.

Maidstone.—Road Materials.—For R.D.C. F. Post, clerk.

Reigate.—Highway Materials.—For T.C. F. T. Clayton, B.S.

Walsall.—Road Materials. For R.D.C. W. P. Young, E. and S.

FEBRUARY 11.

Chislehurst.—Highway Materials.—For U.D.C. J. J. Brown, clerk.

Coventry.—Highway Materials.—For T.C. E. H. Ford, City E. and S.

Dublin.—Cast-iron Pipes, etc.—For C.B. G. J. Sherlock, T.C.

Gainsborough.—Road Materials.—For U.D.C. W. Parker, E. and S.

Gosport.—Road Materials, etc.—For T.C. B.E.

London.—Builders' Materials.—For St. Marylebone B.C. R. C. Graves, T.C.

Ruislip-Northwood.—Road Materials.—For U.D.C. H. R. Metcalfe, E. and S.

Runcorn.—Road Materials.—For R.D.C. J. L. Beckett, E. and S.

Southport.—Road Materials.—For C.B. A. E. Jackson, B.E. and S.

Surbiton.—Highway Materials.—For U.D.C. H. T. Mather, S.

Westmorland.—Tar, etc.—For C.C. C. E. Hines, C.S., 12, Lowther-st., Kendal.

FEBRUARY 12.

Cardiff.—Cement, etc.—For T.C. City E.

Driffield.—Road Materials.—For R.D.C. C. H. Hines, S.

Leeds.—Road Materials, etc.—For T.C. E. W. Lockerbie, Highways E., 156, Kirkstall-rd.

Oakworth.—Road Materials.—For U.D.C. G. Blackbrough, E. and S.

Packham.—Road Materials.—For U.D.C. J. Wrest, E. and S.

Poole.—Highway Materials, etc.—For T.C. E. J. Goodacre, B.E.

FEBRUARY 13.

Cornwall.—Road Materials.—For C.C. C.S.

Friern Barnet.—Granite Chippings, etc.—For U.D.C. J. M. Gameson, E. and S.

Horncastle.—Road Materials.—For R.D.C. J. S. Derbyshire, S.

Isle of Ely.—Granite, etc.—For C.C. R. S. W. Perkins, C.S.

London.—Road Materials.—For Hackney B.C. C. Holt, B.E. and S.

London.—Paving Materials, etc.—For Deptford B.C. A. Purkis, T.C.

London.—Road Materials.—For Islington B.C. C. G. E. Fletcher, T.C.

London.—Road Materials.—For Shoreditch B.C. B.S.

Middlesex.—Road Materials.—For C.C. A. Dryland, C.E.

Richmond (Surrey).—Highway Materials, etc.—For T.C. J. W. Trodd, B.E. and S.

Tadcaster.—Road Materials.—For R.D.C. Geo. A. Bromet, clerk.

Teddington.—Road Materials.—For U.D.C. E. Bostock, S.

FEBRUARY 14.

***Lambeth.**—Materials and Services.—Tenders for alternative periods of six and twelve months, from March 31, 1929, and for alternative periods of one,

two or three years from March 31, 1929, for disposal of street sweepings for the Lambeth B.C. Osmond Catlin, M.Inst.C.E., Borough Engineer, Town Hall, Brixton Hill, S.W.2.

FEBRUARY 15.

Doncaster.—Highway Materials.—For R.D.C. W. R. Crabtree, S.

Leeds.—Builders' Materials.—For Electricity Department. C. Nelson Hefford, Manager, Electricity Department, 1, Whitehall-rd.

FEBRUARY 16.

Bedfordshire.—Road Materials.—For C.C. C.S.

Eccles.—Road Materials.—For T.C. B.S.

Felixstowe.—Cement, etc.—For U.D.C. H. Clegg, S.

Frimley.—Road Materials.—For U.D.C. R. H. Porteous, E. and S.

Long Sutton.—Highway Materials.—For U.D.C. S.

Staines.—Road Materials.—For R.D.C. D. C. Fidler, E. and S.

FEBRUARY 18.

Belfast.—Builders' Materials, etc.—For C.B. Frank H. Whysall, City Electrical Engineer and General Manager.

Birkenhead.—Granite, etc.—For Corporation. E. W. Johnson, B.E. and S.

Diss.—Granite, etc.—For U.D.C. A. Cooper.

Easington.—Slag, etc.—For R.D.C. R. U. Harper, S.

Hornsea.—Tarmacadam.—For U.D.C. H. W. Boardman, E. and S.

London.—Builders' Materials.—For Bethnal Green B.C. A. E. Darby, B.E. and S.

London.—Builders' Materials, etc.—For Finsbury B.C. B.S.

Ossett.—Highway Materials.—For T.C. B.S.

FEBRUARY 19.

Leeds.—Lime.—1,000 tons, for T.C. E. H. Howatson, Sewerage Engineer, 8, Park-sq.

Maldens and Coombe.—Road Materials.—For U.D.C. S.

Nottingham.—Road Materials.—For T.C. T. Wallis Gordon, City E. and S.

Tottenham.—Paving Materials.—For U.D.C. E. Townson, clerk.

Tottenham.—Road Materials. For U.D.C. E. Townson, clerk.

FEBRUARY 20.

Hull.—Builders' Materials.—For T.C. T. Thomas, City E.

London.—Road Materials.—For Fulham B.C. W. Townend. T.C.

Long Eaton.—Road Materials.—For U.D.C. H. Raven, C.E., S.

Swansea.—Road Materials.—For C.B. B.E. and S.

FEBRUARY 21.

Holland (Lincs).—Highway Materials.—For C.C. W. A. Rogerson, C.S.

ENGINEERING. IRON AND STEEL

FEBRUARY 6.

Dublin.—Installation.—Insulation work and installing of complete refrigerating plant for the new cold storage at the city abattoir, North Circular-rd, for C.B. F. McArdle, architect and civil engineer, 29, Rosemary-rd., Belfast. Dep. £5 5s.

FEBRUARY 8.

Llandilofawr.—Sewerage.—Stoneware and cast-iron sewers, with manholes and other appurtenant works, to be carried out to sewer the villages of Llandebie, Bonllwyn and Penybank, within the Parish of Llandebie, for R.D.C. D. Watkin Rees, engineer, 8, Wind-st., Ammanford. Dep. £10 10s.

FEBRUARY 9.

Aberdovey.—Water Supply.—For Aberdovey, for Towyn D.C. R. Barnett, clerk.

Oadby.—Sewerage.—Construction of sewage-disposal works for: (1) about 200 yds. of 12 in. outfall sewer; (2) 2 sedimentation tanks, 3 humus tanks, 2 storm-water tanks, 4 percolating filters 50 ft. in diameter, and incidental works thereto, for U.D.C. G. Edgar Fryer, E. and S. Dep. £2 2s.

FEBRUARY 11.

Pontardawe.—Sewerage.—Construction of about 466 yds. of 12 in., 1,074 yds. of 9 in., 40 yds. of 6 in. cast-iron pipe sewers; 949 yds. of 12 in., 9,554 yds. of 9 in., and 2,580 yds. of 6 in. stoneware pipe sewers, together with construction of brick manholes, flushing chambers, and ventilating shafts, etc., at Gwaun-Cae-Gurwen, for R.D.C. B. Islwyn Phillips, engineer. Dep. £5.

FEBRUARY 12.

Bolsover.—Tower.—New water tower in Langwith-rd., for U.D.C. T. B. Kenyon, clerk. Dep. £10 10s.

Eton.—Sewage Disposal.—New sewage disposal works, consisting of screen and screening chamber, pump and motor house, sedimentation tanks, bacteria beds, storm-water standby tank, sludge lagoons, etc., on land situate in Iver, for R.D.C. A. Gladwell, E. Dep. £3 3s.

FEBRUARY 14.

Belper.—Drainage.—Sewerage and sewage disposal works for Markeaton and Allestree, for R.D.C. Sands & Walker, engineers, Milton-chambers, Nottingham. Dep. £3 3s.

Blackpool.—Steelwork.—170 tons steel reinforcement, for Harrowside-lane garage, for C.B. F. Wood, B.E. and S.

Caterham.—Drainage.—Construction, in low level area of district, of about 20,000 yds. of stoneware and cast-iron sewers of 7 in., 9 in. and 12 in. in diameter, together with all manholes, ventilating shafts, and other appurtenant works, for U.D.C. John Taylor & Sons, engineers, Caxton House, Westminster, S.W.1. Dep. £5.

FEBRUARY 16.

Cairo.—Tower.—Cooling tower, elevated tank, supporting structure, piping connections and centrifugal pump, for Egyptian Ministry of Public Works. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 7373.)

Horton.—Sewerage.—In Totley, for R.D.C. Surveyor, 1, Camping-lane, Woodseats, Sheffield.

FEBRUARY 18.

Tendring.—Sewerage.—Laying of about 5,000 yds. of 9 in. and 12 in. sewers, with manholes and ventilators, together with tanks, percolating filters, etc., at Kirby-le-Soken, for R.D.C. F. G. Vincent-Brown, E. and S., Dovercourt.

FEBRUARY 25.

Littlehampton.—Reservoir.—Reinforced concrete reservoir, together with sundry pipe connections, meters, and other ancillary works, for U.D.C. Howard Humphreys & Sons, consulting engineers, 28, Victoria-st., Westminster. Dep. £3 3s.

FEBRUARY 26.

Hemel Hempsted.—Bridge.—Demolition of old bridge and construction of new bridge over Grand Junction Canal, in Fishery-rd., for T.C. A. Murray-Smith, B.E. Dep. £5 5s.

FEBRUARY 28.

Antwerp.—Bridges.—2 swing bridges, for T.C. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 7382.)

Johannesburg.—Steelwork.—Structural steelwork for the new coaling plant, Queenstown, for South African Railways and Harbours. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 7378.)

Siam.—Superstructures.—Steel bridge superstructures, for Siamese State Railway. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 7098.)

MARCH 4.

Edinburgh.—Bridges.—Two steel plate-web girder bridges, each of one span, including abutments, wingwalls, and steel trough decking, on new Glasgow to Edinburgh-rd., section F-G (Dechmont to Broxburn), for T.C. D. A. Donald, engineer, 271, Alexandra-parade, Glasgow, E.1. Dep. £3 3s.

Perth.—Reconstruction.—Of Trossachs-rd., including widening and resurfacing of roadway and widening of bridges in masonry, for C.C. W. L. Gibson, E. and S. Road Surveyor's Office, Dun-

MARCH 15.

Bann.—Drainage.—Flood gates in Toome, Portna and the Cutts Navigation Weirs on the Lower Bann River, for Government of Northern Ireland. Secretary, Ministry of Finance, 15, Donegall-sq. West, Belfast. Dep. £10.

APRIL 8.

Melbourne.—Towers.—Galvanised steel transmission line towers, for State Electricity Commissioners of Victoria. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 7401.) blane.

ROAD, SEWERAGE, AND WATER WORKS

FEBRUARY 4.

Erpingham.—Mains.—Supplying and laying about 650 yds. 4-in. cast-iron water main with extras, for Holt Waterworks, for R.D.C. A. Burrell, Station-road. Holt, Norfolk.

Grimsby.—Making-up.—At rear of 2-40, Convamore-rd., in reinforced concrete, for Corporation. H. G. Whyatt, B.E., 170, Victoria-st.

Llanelly.—Making-up.—Of Palace-av. (part of), Walters-rd. (part of), King George-av., south back street of Palace-av., east back street King George-av., west back street King George-av., north back street, Walters-rd. (part of), Elizabeth-st., south back street Elizabeth-st., north back street Elizabeth-st. (part of), Corporation-av. (part of), Maesyrnaf-rd. (part of), Parc Howard-av. (part of), Florence-st., Marged-st., west back street Marged-st., north back street Marged-st., for T.C. B.S. Dep. £2.

London.—Road.—Roadwork on section II (part) and section III of Grove Park housing scheme, for Lewisham B.C. B.S.

Manchester.—Drainage.—Plumbing work in connection with drainage of houses and other premises for Corporation. J. Irvine, Manager of the Drainage Branch, Public Health Department, Phœnix-bldgs., 20, Cooper-st. Dept. £1 1s.

Mynyddislwyn.—Improvements.—Widening and improvement of Blackwood-rd., from Pontllanfraith to High-st., Blackwood, together with all accommodation works necessary, which comprise brick forecourt walls, retaining walls, fencings, etc., and all other works in connection therewith, for U.D.C. G. Wishart, E. and S. Dep. £3 3s.

Portsmouth.—Paving.—Laying compressed rock asphalte paving in Fratton-rd., between Lucknow-st. and Alver-rd., for T.C. R. J. Jenkins, City E. Dep. £2 2s.

Scunthorpe and Frodingham.—Making-up.—Of several streets and 10-feet roads in Cole-st. area, for U.D.C. W. Farrar, E. and S. Dep. £1.

Surbiton.—Sewer.—For (1) Berrylands, approximately 300 yds. of 9 in. stoneware pipe sewer, with necessary brick manholes and contingent works; and (2) Elgar-av., consisting of repairs to concrete carriageway, kerbing, artificial stone paved footways, for U.D.C. S. Dep. £2 2s.

FEBRUARY 5.

Colwyn Bay.—Making-up.—Of Woodlands-av. (South), Old Colwyn, and Church-drive, Rhos, for U.D.C. W. J. Dunning, E. and S.

Teddington.—Mains.—Supplying and laying C.I. gas and water mains, etc., at National Physical Laboratory, for H.M.O.W. Contracts Branch, H.M. Office of Works, King Charles-st., S.W.1. Dep. £1 1s.

FEBRUARY 6.

Acton.—Roads.—Town-planning road No. 1 (part only) and town-planning road No. 3, for T.C. B.E. Dep. £2 2s.

Down.—Road.—Reconstruction of about 3 miles Newry-Warrenpoint-rd., for C.C. J. G. Wilkin, C.S., Courthouse, Downpatrick.

Heston and Isleworth.—Making-up.—Of Ridgeway-rd. (part 2), for U.D.C. J. G. Carey, E. and S. Dep. £2 2s.

Huddersfield.—Creosoted wooden paling fence, complete with reinforced concrete posts, for C.B. B.E., 1, Peel-st.

London.—Pipelaying.—Pipelaying, alterations and bricklayers' work within areas of Kent, Northern, Southern and Western Districts, for M.W.B. Chief Engineer, 173, Rosebery-av., Clerkenwell, E.C.1.

Soke of Peterborough.—Reconstruction.—Of Crowland-rd., near Peterborough, for C.C. H. Russell, C.S.

Swansea.—Making-up.—Of Fern-st. (from Middle-rd. to Western boundary of 37, Fern-st.); Stepney-st. (from Fern-st. to back street at south side of Fern-st.), back street at rear of Middle-rd. leading westward from Fern-st.; back street at rear Middle-rd. leading eastward from Fern-st., for C.B. J. Richard Heath, B.E. and S.

Wembley.—Making-up.—Of Monks-park; Vivian-av. (east portion); Grittleton-av.; Stonebridge-way; Priory-av., for U.D.C. R. W. Chapman, E. and S.

West Ham.—Making-up.—Of Memorial-av. (part), Holland-rd., Wallace-rd. (part), for C.B.

Windlesham.—Drainage.—For (1) Chertsey-rd., Windlesham, 150 yds. of 8 in. sewer, maximum depth 20 ft., and (2) Lightwater-rd., Lightwater, 150 yds. of 12 in. sewer, maximum depth 12 ft., together with manholes and vertical house connections, for U.D.C. C. Gray, S.

FEBRUARY 7.

Farnham.—Sewerage.—650 yds. of 9 in. diameter stoneware pipe sewers, with manholes, and other incidental works, at Rowledge, for R.D.C. Willcox & Raikes, engineers, 33, Great Charles-st., Birmingham. Dep. £2 2s.

Leeds.—Paving.—Kerbing, flagging, tar paved footpaths and tar macadamising carriageways in Milan-st., Back Milan-st., Back Hilton-place, Barkly-rd., Halliday-place, Halliday-drive, Hall-rd., Athlone-grove, Sandhurst-av., Roman-gardens, Back Roman-grove, Back Station-parade, for T.C. Highways Engineer, 155, Kirkstall-rd., Leeds.

Luton.—Making-up.—Length of 330 yds. or thereabouts in Kingsway, for T.C. J. W. Tomlinson, B.E. and S., 18, Upper George-st.

Mitcham.—Making-up.—Of Galpins-rd. (in tarmacadam), and Manton-way (in concrete), for U.D.C. S.

Southend-on-Sea.—Making-up.—Of Carnarvon-rd., (sec. 2); Cheltenham-rd.; Leamington-rd.; Manilla-rd., Olive-av. (sec. 1); and Second-av., for C.B. H. Dver, B.E. and S. Dep. £1 each rd.

Stockport.—Paving.—Also repairing carriageways, for C.B. H. Hamer, B.S.

FEBRUARY 8.

Bexhill.—Extension.—222 yds. lin. of 12 in. pipe sewer, and 376 yds. lin. of 9 in. pipe sewer, together with necessary manholes, etc., in Little Common-rd., for T.C. G. Ball, B.S. Dep. £1 1s.

London.—Paving.—Rogers-rd. and Morven-rd., Tooting, for Wandsworth B.C. E. J. Elford, B.E., 215, Balham High-rd., S.W.17. Dep. £1 1s.

FEBRUARY 9.

Glasgow.—Reconstruction.—Of 4 miles of existing road between Newhouse and Dewshill, to form part of a new road from Glasgow to Edinburgh, for T.C. D. A. Donald, engineer, 271, Alexandra-parade, Glasgow. Dep. £3 3s.

Reigate.—Tarring.—Approximately 430,000 yds. super. of road surface, for T.C. F. T. Clayton, B.S.

Tynemouth.—Main.—Laying and jointing about 3 miles of 10 in. water main, etc., near Rothbury, Northumberland, for Corporation Waterworks. J. W. McKerrow, Water Engineer and Manager, Norfolk-st., North Shields. Dep. £1 1s.

FEBRUARY 11.

Blean.—Tar Painting.—About 400,000 yds. super. on roads, for R.D.C. F. A. Ward, S. and E.

Essex.—Road.—Construction of bridge and approaches of reinforced concrete, with approach embankments and diversions of parts of adjacent roads, and a small widening at Wadham Lodge Farm, including the maintenance of railway and road traffic through the site of the works, for M.T. Chief Engineer, Roads Department, Ministry of Transport, 7, Whitehall-gardens, S.W.1. Dep. £25.

Glasgow.—Sewer.—15 in. pipe sewer in Carmunnock-rd., for T.C. D. Stenhouse, T.C.

Hereford.—Tar Painting.—277,000 super. yds., approximately, tar painting works, to be carried out on main and district roads, for T.C. City E.

Knaresborough.—Improvements.—Also widening of Leeds and Harrogate main road at Almsford-bank, and in vicinity of Almsford-bridge, for West Riding C.C. West Riding Surveyor. Dep. £1.

Leighton Buzzard.—Water Supply.—Improvements and additions to the water supply, for the Leighton Buzzard U.D.C. Parker, Pearson & Ross Hooper, engineers, Dallas Chambers, Chippenham, Wilts. Dep. £5.

Leighton Buzzard.—Sewerage Disposal Works.—Alterations and additions, supply of machinery, etc., in connection with above scheme, for the Leighton Buzzard U.D.C. B. H. Robiant, S., Council Offices

Sidcup.—Sewer.—Construction of about 2 miles of sewers, varying in size from 15 in. to 9 in., with manholes and other works incidental thereto, for U.D.C. F. Bird, Clerk. Dep. £5 5s.

Southampton.—Making-up.—Of Warren-crescent, Shirley Warren, for C.B. B.E. Dep. £3 3s.

Sutton.—Sewers.—Laying of surface-water sewers in Gander Green-lane, 704 lin. yds. of 12 in. pipes; Langley Park-rd., 320 lin. yds. of 9 in. pipes;

Devonshire-rd. and Egmont-rd., 120 lin. yds. of 9 in. pipes, for Sutton and Cheam U.D.C. W. H. Grieves, S. Dep. £3 3s.

FEBRUARY 12.

Barnes.—Making-up.—Of Queen's Ride, Rothesay-av., and Burdenshott-av., for U.D.C. F. P. Kindell, E. and S. Dep. £2 2s.

Chingford. — Improvements. — Reconstruction of "The Ridgeway," for U.D.C. E. and S. Dep. £2 2s.

Chingford.—Making-up.—Of Westward-rd. (part 2), for U.D.C. E. and S. Dep. £1 1s.

Dublin.—Asphalt.—Laying of 4,100 yds. super., approximately, of mastic asphalt, in Lower Baggot-st., for C.B. J. Sherlock, T.C. Dep. 5s.

Watford. — Making-up. — Of Cassiobury-drive (part 1), Parkside-drive (part 1), Woodland-drive (part 1), and Stratford-way, for T.C. W. W. Newman, B.E. Dep. £2 2s.

FEBRUARY 13.

Blandford Forum.—Sewerage.—5,900 yds. lin. of 12 in., 9 in. and 7 in. (mostly 9 in. and 7 in.) concrete pipe sewers, with concrete manholes, and other appurtenant works, for T.C. W. H. Radford & Son, civil engineers, Albion-chambers, King-st., Nottingham. Dep. £3 3s.

FEBRUARY 25.

London.—Mains.—2,770 lin. yds. of 18 in. dia. main between Finchley-rd. and the North Circular-rd.; 1,875 lin. yds. of 18 in. dia. main between Brent-st. and Holders Hill-rd.; 1,520 lin. yds. of 24 in. dia. main between the Vale, Hendon, and the North Circular-rd.; and 342 lin. yds. of 24 in. dia. and 16 in. dia. main in Westbere-rd. and Millane, N.W., for M.W.B. Chief Engineer, 173, Rosebery-av., E.C.1. Dep. £10.

FEBRUARY 28.

Chertsey.—Drainage.—Supply and laying of 24 in., 21 in. and 12 in. concrete tubes, and 9 in. stoneware pipe sewers, together with manholes, catchpits, and gullies, reconditioning watercourses and other appurtenant works, in Pyrford, for R.D.C. Capt. H. Beeney, Surveyor.

NO DATE.

Castleford.—Pointing.—Playground and pointing Glass Houghton: Cutsyke Council school. Divisional Clerk, Education Offices, Castleford.

Coatbridge.—Road.—For (*a*) bottoming and bituminous surfacing about 2,500 sq. yds., and (*b*) paving with whin setts about 1,600 sq. yds., for T.C. B.S. Dep. 10s. each.

Garforth.—Asphalting.—At Swillington Temporary Council school, for West Riding E.C. H. W. Powell, Education Offices, Garforth.

Auction Sales, Tenders, etc.

FEBRUARY 5.

***Sidcup.**—Norbury-Smith & Co. will sell, in about 250 lots, on the premises, Sidcup House, Sidcup, the fixtures and fittings for Old Georgian residence. Auctioneers, 8, Conduit-st., Regent-st., W.1.

FEBRUARY 7.

Roehampton.—Veryard & Yates will sell, without reserve, to clear site (off Upper Richmond-rd. and Kingston-rd.), Roehampton, S.W., building material from demolition of Trinity Church. Auctioneers, 396, Norwood-rd, S.E.27.

FEBRUARY 11.

London.—Alaway and Partners will sell (re Simmonds Bros., Ltd. (1925 (in liquidation). By order of the liquidators, Agincourt Works, Agincourt-rd., N.W.3), on the premises as above, stock of an exhibition and general hire contractor, auctioneers, 20, Bloomsbury-sq., W.C.1.

Public Appointments

FEBRUARY 4.

Chelmsford.—Two fully qualified sanitary surveyors on the temporary staff of the County Architects' Department required by the Essex C.C. Jno. Stuart, F.R.I.B.A., City Architect, Old Court, Springfield, Chelmsford.

Kingston-upon-Thames.—Building Inspector required in the Borough Surveyor's Department by the Corporation of Kingston-upon-Thames. B.S., Clattern Lodge, Kingston-upon-Thames, endorsed "Buildings Inspector."

FEBRUARY 9.

Bradford.—Architectural Assistant required by the Bradford City Council. City Architect, Town Hall, Bradford.

FEBRUARY 11.

***Exeter.**—Assistant Clerk of Works required for about 18 months, in connection with the erection of 428 houses, Burnthouse-lane, for the Exeter City Council. John Bennett, City Architect, Exeter.

London.—A visiting teacher of interior decoration and furniture design for two full attendances a week required as from April 9 at the L.C.C. Central School of Arts and Crafts, Southampton-row, W.C.1. Edu. Officer (T.1a), County Hall, Westminster Bridge, S.E.1.

Sheffield.—Inspector in the Dept. having control of the houses belonging to the Council (two appointments will be made, persons appointed being placed in Class C, Grade 3, of the Council's Grading Scheme) required by the Sheffield City Council. City Architect, Town Hall, Sheffield.

FEBRUARY 14.

***Leicester.**—(1) Fully Qualified Quantity Surveyor; (2) Senior Architectural Assistant; (3) Architectural Assistant, required in the City Engineer and Surveyor's Department, by the Leicester City Council. A. T. Gooseman, M.Inst. C.E., City Engineer and Surveyor, Town Hall, Leicester.

FEBRUARY 15.

***Rotherham.**—Building Inspector and Building Clerk of Works required by the Rotherham T.C., under the direction of the Borough Engineer, Vincent Turner, M.Inst.C.E., B.E., Municipal Offices, Rotherham.

FEBRUARY 16.

***Durham.**—Junior Architectural Assistant required by the Durham C.C. Director of Education, Shire Hall, Durham.

APRIL 3, 4, 5.

London.—London Building Act, 1894.—District Surveyors at a London Centre, an examination of persons presenting themselves for the purpose of being examined for duties of District Surveyors. Clerk of the Council, the County Hall, Westminster Bridge, S.E.1.

CONTRACTS PLACED

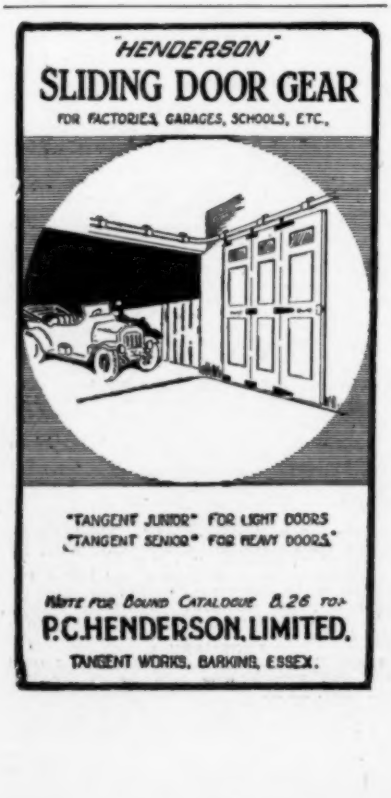
Bexhill-on-Sea. — WAREHOUSES. — A new warehouse is to be built in Springfields-road for Messrs. Melpham & Sons. The builders are Messrs. Strange & Son, 8, Terminus-road, and the steelwork will be supplied by Messrs. Couper & Co., Brighton. The architect is Mr. G. H. Gray, L.R.I.B.A., 21, Sea-road.

Birmingham.—SHOWROOMS.—The contract for the erection of the large block of showrooms and offices in Broad-street, for Messrs. Parker, Winder & Achurch, Ltd., merchants, has been placed with Messrs. W. J. Whittall & Sons, of Lancaster-road, Birmingham. The plans for the building have been prepared by Messrs. F. B. Andrews & Son, 95, Colmore-row.

Kingston-on-Thames. — REBUILDING. — Messrs. Grindley, Miskin and Co. are rebuilding their premises in Thames-side after the recent fire. The builders are Messrs. W. H. Gaze and Son, Ltd., High-street, and Messrs. Simpus and Co., Kingston Hill. The architect is Mr. A. J. Hardwicke, F.R.I.B.A., Eagle-chambers, Eden-street.

Southend-on-Sea.—BRANCH.—Messrs. Marks & Spencer, Ltd., Chiswell-street, E.C.1, have decided to build new branch showrooms, and have placed a contract with Messrs. Bovis (1928), Ltd., 43, Upper Berkeley-street, W.1. The plans have been prepared by Mr. A. E. Batzer, A.R.I.B.A., 36, Ebury-street, S.W.1.

Taunton.—PREMISES. — Messrs. Montague Burton, Ltd., tailors, Leeds, are building new branch showrooms, to the plans of their architect, Mr. Harry Wilson, 81, North-lane, Roundhay, Leeds. The builders are the Lansdowne Building Co., Lansdowne Works, Lansdowne-road, Brixton, S.W.9.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PROPOSED NEW BUILDINGS AND OTHER WORKS*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.A.B. for Metropolitan Asylums Board; and M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A.; Surveyor, S.; Engineer, E.; Borough Architect, B.A.; Architect, A.

Acton.—T.C. passed plans: F. J. Fisher & Son, architects, 35, John-st., Bedford-row, W.C.1, addition at Western-av. Hotel, Watney, Combe, Reid & Co., Western-av.; F. R. Taylor, architect, 23, Pleydell-av., W.6, alterations and additions for H. Anstiss, 4, Acton-lane; J. Batty, A.R.I.B.A., architect, 51, Swinburne-rd., Putney, S.W.15, colour factory and motor car assembly factory, for Colour Photographs, Ltd., Victoria-rd.

Aldershot.—Sports Stadium, with dirt track, etc., proposed at Aldershot. A. H. Dungan, architect, Alpha-chambers, South Farnborough.

Barking Town.—U.D.C. recommend offer from Diocesan Authorities, a site on Upney estate. Plans passed: 23 houses in Ventnor-gardens, for J. Ranson; offices at Creeksmouth, for Lawes Chemical Manure Co., Ltd.

Barnsley.—M.H. sanction borrowing of £45,371 by C.B. for erection of 150 additional houses, including 48 by direct labour, on Burton Grange scheme.

Bedford.—Appeal for funds to carry out repairs to belfry frame at St. Paul's Church, Bedford, being made. Some £200 to £300 is required.

Belfast.—Belfast Church Extension Committee reported that site for new church at Finaghy been passed by Representative Body. Site for new parochial hall also been obtained. In connection with building of new church at Cregagh, a site had been obtained at Cregagh Park.

Bentley (Yorks).—The U.D.C. approves reconstruction of mineral water factory in Cooke-st., for J. Richards.

Bingley.—Aaron King & Co., brewers, Cooke-lane, Keighley, will erect new licensed premises on land to Harden-rd. and Keighley-rd.

Bingley.—Bingley Council, on the "St. Ives" estate, 821 acres, propose municipal golf course, to be laid out by James Braid.

Blackpool.—Hindle & Waterhouse, architects, 5, Cedar-st., Blackpool, plans of houses on 23 acres estate at Lytham-rd. and St. Ann's-rd.

Bolton.—Funds being raised for Sunday schools by members of the Chorley Old-rd. Congregational Church. Scheme is estimated to cost £9,000. Architects, Ormrod, Pomeroy & Foy, FF.R.I.B.A., 2, Acresfield.

Bolton.—Rev. W. Leighton, SS. Peter and Paul, proposes additions to infants' school, at £6,500. Plans by Harold Greenhalgh, P.A.S.I., 15, Mawdesley-st., Bolton.

Bromsgrove.—U.D.C. are to acquire Bromsgrove Vicarage and grounds and convert premises into council chamber and public offices.

Chapel-en-le-Frith.—Housing Committee of R.D.C. recommend that Mr. Dinsdale be instructed to prepare estimate of cost of erection of 12 additional small non-parlour type houses on Ashbourne-lane site, Chapel.

Chester.—T.C. passed plans: Alterations at Old Nags Head hotel, Foregate-st., for Peter Walker & Son (Warrington & Burton), Ltd.; alterations at 106 and 108, Foregate-st., for Chester Co-operative Society, Ltd.; alterations at Queen's Arms, 23, Brook-st., for Peter Walker & Son (Warrington & Burton), Ltd.; stores at Reliance Works, for Williams & Williams, Ltd.

Coventry.—A cathedral parish hall is to be built.

Cranford.—The Heston and Isleworth B.C., in Cranford-lane, propose school. Plans by J. G. Carey, Town Hall-chambers, Hounslow.

Croydon.—C.B. passed plans: W. T. Cripps, South-rd., Preston, 12 houses and 4 garages, Oakhill-rd.; A. M. Scott, 57, Birdhurst-rise, extension to showroom, Blunt-rd.; G. W. Peachey, 13, Arundel-st., W.C.2, 6 houses, Crest-rd.; G. Peskett, 337, Brighton-rd., 4 houses and garages, Hurst View-rd.; Thomas & Son, Station-approach, Chipstead, 34 houses, Biggin-hill, Covington-gardens, and St. Oswald's-rd.; R. J. Brind, 53, Dagnall-park, 3 garages, Edith-rd.; S. R. Docking, Gladstone-rd., warehouse, Gladstone-rd.; S. Jeffries, Ross-rd., 32 houses, Ladbrook, Thirsk, Dunkeld & Oban-rds.; F. T. Woodings & Sons, 114, Waverree-rd., S.W.2, 25 houses and 12 garages, Earlswood-av., and 6 houses, London-rd.; E. Bates, 27, Queen Victoria-st., E.C.3, alterations and setting back, 74-78, North-end; H. Macintosh, East Croydon, 22 houses and 14 garages, Briar-av.; H. J. Linfoot, 2, Queen's-parade, Brighton-rd., 16 flats, Warham-rd.; Browett Taylor & Co., Lincoln's Inn Fields, W.C.2, shops with offices over North-end.

* See also our List of Contracts, Competitions, etc.

Croydon.—C.B. recommend that combined refreshment kiosks and shelters be provided at Croham Hurst and Ashburton Park, at £850.—Boundary fence at Grangewood, adjoining Ross-rd., is to be replaced by unclimbable iron fence, at £335.

Darlington.—Cockerton Wesleyan Church are to erect Sunday school, at £2,000.

Doncaster.—£3,000 structural alterations at the Welfare Institute in Cleveland-st. are proposed.

Dorking.—Council received sanction of M.H. to borrowing of £860 for provision of public sanitary conveniences in market.

Dundee.—Inquiry by Board of Health been held in connection with Town Council's slum clearance scheme in Small's Wynd district.

Easington.—R.D.C. seeking sanction from M.H. to erect 60 houses, and to borrow £15,000.

Felixstowe.—U.D.C. inviting tenders for erection of 24 houses in Maidstone-rd.

Garstang.—Catterall & Swarbrick's Brewery, Ltd., Talbot-rd., Blackpool, on arterial road at Cathouses, Nateby, propose new licensed premises.

Glasgow.—The British and Colonial Furniture Co., Ltd., 7, Cavendish-sq., W.1, in Renfield-st., propose block of shops and office premises. Plans by James Miller, A.R.S.A., 15, Blythswood-sq., Glasgow.

Gravesend.—T.C. propose further houses on the King's Farm estate. Plans by J. G. Bennetts, L.R.I.B.A., 5, Woodville-terrace.

Ham.—An Equestrian Club, with stabling for 40 horses, club-house, bungalows, etc., is proposed at Ham. L. E. Little, architect, 17, Victoria-st., S.W.1.

Halifax.—Architect's Department of Thomas Ramsden & Son, Ltd., Stone Trough Brewery, Halifax, plan new hotel near Bowling Green Inn, in Horsfall-st.

Halifax.—Health Committee considering extensions to fever hospital at Stoney Royd.

Harrow-on-the-Hill.—Harrow School have acquired the old Bowden House Preparatory School for conversion into a school sanatorium, at £14,000. Plans by Sir Herbert Baker, A.R.A., Barton-st., S.W.1.

Hounslow.—Is to have 120 more municipal houses.

Huddersfield.—Important extensions to works of British Dye-Stuffs Corporation, Ltd., been mentioned by Mayor of Huddersfield, at annual meeting of Huddersfield Chamber of Commerce. The Mayor said that British Dye-Stuffs Corporation intended to spend £300,000 on extending and improving their works and plant at Dalton.

Idle.—Bradford Corporation propose new swimming baths, with public washhouses and a clinic.

Ilford.—T.C. passed plans:—A. P. Griggs, 3 houses, 2 garages, 8-12, Chichester-gardens, 6 houses and garages, 2-12, Chelmsford-gardens, 7 houses and garage, 125-137, The Drive; A. Smith, 6 houses and garages, 34-44, Collingwood-gardens; Freeman, Hardy & Willis, Ltd., alterations at 107, High-rd.; T. Jay Evans, alterations and additions, 177-183, High-rd.; Brand & White, Ltd., 15 houses and garages, 2-30, Coniston-gardens; E. Meredith, 6 houses and garges, Horns-rd.; J. Aldridge, 8 lock-up garages, rear of 1-2, Green Gate-parade, Horns-rd., for Geo. Gray, Ltd.; S. A. S. Yeo, alterations and additions, "Rose and Crown" public house, Ilford-hill, High-rd.

Isleworth.—Brentford Guardians have instructed the engineering expert (Mr. W. M. Binny), and the architects (Messrs. Dodge & Reid, High-st.), to plan proposed extensions to the West Middlesex Hospital.

Kettering.—U.D.C. passed plans:—Northampton Brewery Co., alterations to "The Golden Lion," Market-st.; Miss C. E. Stockburn, 4 cottages, Broadway.

Kidderminster.—T.C. decided, subject to approval of M.H., to accept tender of Wolverhampton firm to build 40 houses on Sutton Park estate, at £13,220.

Kingston (Surrey).—British Petroleum Co., Ltd., Britannia House, Moorgate, E.C.2, propose to purchase site in Villiers-st. for an oil storage depot.

Kingswood.—U.D.C. approved erection of 6 houses at Chiphouse, Kingswood.

Leamington Spa.—T.C. resolved that subject to approval of M.H. further 56 non-parlour type houses be erected on Rushmore Farm estate.—Plans been approved for alterations, Newbold Inn, Newbold-st., for P. Phipps & Co., Ltd.

Leicester.—Leicestershire E.C. approved plans for a temporary junior school, on Brownstone Housing estate, at £3,218

Leeds.—Extensions are proposed at the Meadow-rd. Maltings, for J. Tetley & Sons, Ltd., The Brewery.—Parkin & Sheffield, architects, of Park-lane, are acting for Taylor's File & Tool Co., Ltd., of Wortley, where a scheme of new extensions is proposed.

London (Battersea).—B.C. recommend, subject to approval of M.H., enlarged perambulator shed, with covered way connecting with entrances to Centres, be constructed by Works Department at Southlands Maternity and Child Welfare Centre, at £278 4s. 4d.

London (Fulham).—B.C. recommend to proceed with repair and renovation of Wyfold-rd. dwellings, at £180.—Plans passed: E. K. Rowe and H. W. Binns, additions to garage portions of houses upon site abutting upon Baron's Court-rd., Palliser-rd. and Barton-st.; A. J. Fuller, Borough Electrical Engineer, electricity sub-station upon site on northerly side of Rigault-rd.

London (Lewisham).—L.C.C. recommend borrowing by B.C. of £4,028 for housing purposes within the borough.

London (Woolwich).—L.C.C. recommend borrowing by B.C. of £60,900 for housing purposes.

Luton.—T.C. passed plans: J. Frost, 10 houses Seymour-rd.; W. M. Router, 6 houses, Millfield-rd.; G. Kingham & Son, 6 houses, Winch-st. and Stockingstone-rd.; H. J. Mead, 3 houses, Biscot-lane.

Manchester.—Robert & Sons, constructional ironworks, Upper Duke-st., Hulme, propose to rebuild their premises. Plans by E. A. Newton, architect, 168, Oxford-rd., Manchester.

Mexborough.—F. E. Hall "The Glen," at Hall-av. and Harlington-lane, proposes new licensed premises.

Middlesbrough.—M.H. inquiry been held into application of Corporation when permission to extend borough boundary so as to include 26 acres of land now outside the borough and which forms a portion of housing estate at Marton Grove, was sought.

Mitcham.—Surrey E.C. are to erect a new central school for 720 scholars in Rowan-rd., and to accommodate 336 children in proposed school in Commonside East. Plans by the committee's architects, Jarvis & Richards, 60, Tufton-st., S.W.1.

Newcastle.—Plans have been prepared for five-story nurses' home, for 153 nurses, at the Royal Victoria Infirmary.

Newport (Mon).—Corporation decided to erect at Maesglas about 200 houses of non-parlour type.

Northampton.—C.B. recommend that question of provision of female conveniences at 13, Wellingborough-rd. be recommended, at £1,700.

Norwich.—Burial Board Committee of T.C. recommend that an unclimbable wrought iron fencing be erected along boundary of cemetery on Dereham-rd. and Bowthorpe-rd., as far as the main gates, fencing to be erected on a dwarf concrete wall similar to that recently erected at Farrow-rd., at £1,027.—On recommendation of Mental Hospital Committee, T.C. are, subject to sanction of M.H., two two-story villa blocks, each to accommodate 50 patients, be constructed at Hellesdon Hospital, at £16,136, and necessary ancillary works of hydrant fire mains, cold water supply, main sewer, surface water drain, roads and paths, and airing court shelter, at £1,340.

Radcliffe.—On Peel Park grounds is proposed senior school.

Redruth.—Abattoir proposed at Lower Cardrew, Redruth, to plans by Leonard Winn, L.R.I.B.A., Truro and Redruth.

Rhyl.—Council received sanction from Ministry to pier reconstruction scheme.

Rossington.—Doncaster R.D.C. received M.H. sanction to borrowing £31,907 for Rossington housing scheme.

"R-W" THE BEST
TROLLEY TYPE
SLIDING GEAR
FOR
BIG or LITTLE
DOORS

Four Door "SLIDETITE."
(all other systems made)
GARAGES FACTORIES
AEROPLANE HANGARS
PASSENGER LIFTS
E. HILL ALDAM & Co., Ltd.
THE SLIDING DOOR PEOPLE
93, STAMFORD STREET, LONDON, S.E.1.

Rotherham.—John Haslam, Clayland Farm, Worksop, on site to Melton-rd. and Thorpe-lane, Tick-hill, proposes licensed premises.

Rugby.—R.D.C. received sanction to £2,800 for purchase of land and erection of houses at Church Lawford.—Plans passed: pair houses, W. H. Adams, St. Mark's-av., Bilton; 4 houses, W. H. Taplin, Rugby-rd., Hillmorton.

Salford.—Salford Royal Hospital propose extensions on site of present Union Bank in Chapel-st. Plans by Dr. P. S. Worthington, 178, Oxford-st., Manchester, and P. Barker, 32, King-st. West, Manchester.

Salford.—A scheme for erection of 368 houses by private enterprise in Salford is being developed. Site is one of 31 acres, with a frontage to Lancaster-rd., Pendleton.

Sedgefield.—R.D.C. decided to build further 54 houses by direct labour.

Shields.—Plans passed by Corporation: Mr. Howard Hill, for Mr. P. J. Jordan, preposed stable at rear of 7 and 9 Saville-st. Messrs. John Cartwright & Sons, on own behalf, proposed extension to joiner's shop; F. W. Newby, for W. B. Reid & Co., Ltd.,extension to "Eureka" Hotel, Frederick-st.; T. A. Page & Son, for Alex. Deuchar, Ltd., alterations to "Golden Lion" Hotel, King-st.

Southampton.—Good progress, it is stated by Southern Rly., is being made with £13,000,000 docks extension scheme. Work on scheme to be undertaken during the present year will require an expenditure of about £650,000, and includes erection of new pier-house, to give access to Royal Pier, on one side, and to new recreation ground, which corporation proposes to lay out, on other. New culvert, 7 ft. in diameter, is being constructed to cope with various storm-water drains which discharge along existing foreshore, and two more culverts of same size are being constructed for supply and discharge of sea-water for condensing purposes at corporation electricity station, and for supply of sea-water to corporation swimming baths.

Staines.—Plans passed by R.D.C.: Messrs. Sandell & Wren, 24 houses; W. Marshall, petrol station, Colnbrook By-pass; R. Alcock & Co. propose erecting a factory at Colnbrook.

Shorncliffe.—War Office propose large Regimental Institute at Shorncliffe Camp, to be designed by the Royal Engineers.

Swindon.—T.C passed plans: R. J. Beswick & Son, 6 houses, Scarborough-rd.; A. H. Lister, premises, 53, Fleet-st.; Bishop & Fisher, extension to factory, Newcastle-st.; E. W. Beard, 15 houses, Bruce-st. and Morrison-st.

Swinton (Yorks).—West Riding E.C. propose, at £13,000, middle school on site at Station-st. and Queen-st.

Taunton.—T.C. agreed to purchase for £10,000 Convent of Perpetual Adoration, property including a large house and chapel, two cottages, and nearly three acres of land.

Tolworth.—Hodgson's Kingston Brewery, Ltd., are to build a new public house, "The Bell," on Kingston By-pass-rd. and Fullers-way. Plans by Yetts, Sturdy & Usher, of 34, Gordon-sq., W.C.

Twickenham.—Tamplin's Motors propose to rebuild motor showrooms in King-st. and Cross Deeps. Architects are Brewer, Smith & Brewer, 11, The Green, Richmond.

Uckfield.—Inquiry been held by M.H. into application of R.D.C. for sanction to borrow £3,500, cost of purchase of "Starfield," Beacon-rd., Crowborough, as new Council offices, etc.

Wakefield.—West Riding M.D.C. Committee propose prospective development of the Oulton Hall estate as a colony for mental defectives.

Walsall.—T.C. sanctioned proposals for compulsory acquisition of land at Wolverhampton-rd., Parkbrook, and at Forest, Leamore, for housing purposes.

Walthamstow.—U.D.C. passed plans:—Amended plan of factory, Wood-st., Chas. W. Hodgson; 9 houses, Kitchener-rd., South Essex Property Co.; alterations, 201-203, Hoe-st., G. M. Page; 5 houses, Woodstock-rd., E. E. Wire.

Warrington.—E.C. propose schools at Howley and Alder-lane.

Westbourne.—Plans for new vicarage on land adjoining St. Ambrose Church, been sent to Ecclesiastical Commissioners for approval.

West Thurrock.—The British Carbocite Smokeless Fuel, Ltd., 30-31, St. Swithin's-lane, E.C.4, propose erection of smokeless fuel works, at £45,000. Dr. F. R. Tunks, engineer, 4, Lloyds-av., E.C.

Whitley Bay and Monkseaton.—U.D.C. is seeking sanction to borrow £67,000 for southern promenade, and £7,000 for shelter and café on the northern promenade.

Woodbridge, Suffolk.—R.D.C. propose 6 bungalows at Tuddenham, and 6 in Otley.

Wood Green.—U.D.C. resolved that provision of bowling pavilion in Albert-rd. recreation ground at £500 be approved.—Plans passed:—Rear of 27 and 29, Finsbury-rd., 3 garages, E. Testa & Son; Grosvenor-rd., 11 houses and 4 garages, W. B. Collins.

FIRES.

Hull.—Damage estimated at over £100,000 been caused by fire to shop property. Premises of Yorkshire Warehouse Co., drapers, Chariot-st., Johnson & Sons, clothiers, Charlot-st., and James Woodhouse & Son, household furnishers, Jameson-st., were destroyed.

Cowdenbeath.—Cowdenbeath Public School has been partially destroyed by fire, damage being estimated at £30,000.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 5 6
Second Hard Stocks	3 19 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at King's Cross	2 12 3	Best Blue Pressed Staffs	9 5 0
Do., grooved for Plaster	2 14 3	Do. Bullnose	9 15 0
Do., Bullnose	3 7 3	Blue Wire Cuts	7 5 0

Best Stourbridge Fire Brick :—
2½ in. ..... 8 11 0 3 in. 10 3 0

GLAZED BRICKS—

Best White Ivory, and Salt Glazed Stretchers	21 0 0	D'ble Str'tch'rs	29 10 0
		D'ble Headers	26 10 0
		One Side and one Ends	30 10 0
Headers	20 10 0	Two Sides and one End	31 10 0
Quoins, Bullnose and 4½ in. Flats	27 10 0	Splays, and Squints	28 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS

Delivered London

	s. d.		s. d.
2 in. per yd. super.	1 11	3 in per yd. super	2 9
2½ in. ,, ,,	2 4	4 in. ,, ,,	3 6

	s. d.		
Thames Ballast	9 0	per yd.	delivered 2 miles radius Paddington.
Fit Sand	12 0	,, ,,	
Thames Sand	12 6	,, ,,	
Best Washed Sand	12 6	,, ,,	
½ in. Shingle for Ferro-Concrete	12 0	,, ,,	
¼ in.	12 6	,, ,,	
½ in. Broken Brick	11 6	,, ,,	
Pan Breeze	8 0	,, ,,	

Per ton delivered in London area in full van loads.

Best Portland Cement. British.
Standard Specification. Test £2 4 0 to £2 8 0
30s. alongside at Vauxhall in 80-ton lots.

	s. d.
Ferrocrete per ton extra on above	0 7 6
Super Cement (Waterproof)	3 16 0
Roman Cement	8 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
,, ,, Pink	5 10 0
Plaster, Coarse, Pink	3 0 0
,, ,, White	3 12 6
,, Fine	5 12 0
Sirapite, Coarse	3 9 0
,, Finish	3 17 0
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	1 17 6
Hair per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months carr. pd.
Stourbridge Fireclay in s'cks 37s. 0d. per ton at rly. dp.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube ..... s. d. 2 10

BEER STONE—RANDOM BLOCK—
Free on rail at Seaton Station per ft. cube 2 3
Delivered free on rail Nine Elms, S.R. per ft. cube 3 1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.

PORTLAND STONE.—
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube 4 4½
Do. do. delivered on road wagons at above stations, per ft. cube 4 5½
White basebed, 3d. per ft. cube extra.

NOTE.—1d. per ft. cube extra for every foot over 20 ft *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE.—
Delivered at any Goods Station, London. s. d.
Random blocks from 10 ft. and over P. ft. cb. 14 0
Sawn two sides ,, 22 6
Sawn three or four sides ,, 27 6

YORK STONE, BLUE—*Robin Hood Quality*.
Delivered at any Goods Station, London.
6 in. sawn two sides landings to sizes (under 20 ft. super) ..... Per ft. super 5 6
6 in. rubbed two sides, ditto ..... ,, 6 0
3 in. sawn two sides slabs (random sizes) ,, 2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) ..... ,, 1 6½
1½ in. to 2 in. ditto, ditto ..... ,, 1 5½

HARD YORK—
Delivered at any Goods Station, London.
Scappied random blocks ..... Per ft. cube 6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) ..... Per ft. super 5 1½
6 in. rubbed two sides, ditto ..... ,, 6 1½
4 in. sawn two sides slabs (random sizes) ,, 2 1½
3 in. ditto ditto ,, 2 10
2 in. self-faced random flags ..... Per yd. super 8 6

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 0d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£30 0	3 × 6	£21 0
4 × 9	26 0	3 × 11	25 0
4 × 8	25 0	2 × 11	26 0
4 × 7	23 0	3 × 9	24 0
3 × 8	22 0	2½ × 9	24 0
3 × 7	22 0	3 × 4½	21 0
2½ × 7	21 0	3 × 4	21 0

PLANED BOARDS.

1 × 11	£30 0	1 × 9	£28 0

PLAIN EDGE FLOORING

Inches.	per sq.	Inches.	per sq.
⅞	18/-	1¼	30/-
⅝	21/-	1½	34/-
1	24/-		

TONGUED AND GROOVED FLOORING

Inches.	per sq.	Inches.	per sq.
1	24/-	⅞	16/6
1¼	30/-	⅝	19/-
1½	34/-	1	24/-

Ins. BATTENS.	s. d.	SAWN LATHS.	s. d.
¾ × 2 ..... per 100 ft.	2 6	Per bundle	2 6

1" AND UP THICK.

	£ s. d.	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 16 0	to 0 18 0
Dry American and/or Japanese Figured Oak, ft. cube	0 14 0	to 0 15 0
Dry American and/or Japanese Plain Oak, ft. cube	0 10 0	to 0 13 0
Dry sq. edged Honduras Mahogany, ft. cube	0 15 0	to 0 18 0
Dry Log cut Honduras Mahogany, ft. cube	0 16 0	to 1 1 0
Dry Cuba Mahogany, ft. cube	1 1 0	to 1 10 0
Dry Teak, ft. cube	0 13 0	to 0 15 0
Dry American Whitewood, ft. cube	0 10 0	to 0 14 0
Best Scotch Glue, per cwt.	4 10 0	to —
Liquid Glue, per cwt.	4 7 0	to 5 10 0

SLATES.

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000.

	£ s. d.		£ s. d.
24 by 12	32 18 4	18 by 10	18 12 11
22 by 12	29 17 11	18 by 9	16 9 2
22 by 11	27 14 2	16 by 10	15 12 6
20 by 12	26 5 0	16 by 8	12 3 9
20 by 10	22 10 0		

TILES.

Delivered at London rate stations in full truckloads of not less than 6 tons. Per 1,000. f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	5 7 6
ditto hand-made ditto	5 17 6
Ornamental ditto	6 2 6
Hip and valley tiles (per dozen) { Hand-made	0 9 6
{ Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

	£ s. d.
R.S. Joists, cut and fitted	12 10 0
Plain Compound Girders	14 10 0
,, Stanchions	16 10 0
In Roof Work	19 10 0

MILD STEEL ROUNDS.—To London Station, per ton

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	12 0 0	⅝ in. to ½ in.	10 15 0
⅜ in.	11 0 0	¾ in. to 2¼ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Tubes. Wrought Mild Steel.	Genuine Staffs. Iron.	Fittings. ½ in. and under.	Fittings. Over ½ in.	Flanges. ½ in. and under.	Flanges. Over ½ in.
	%	%	%	%	%	%
Gas	67½	50	42½	45	52½	55
Water	63½	46½	37½	40	47½	50
Steam	60	42½	32½	35	42½	45
Galv. gas	55	37½	32½	35	42½	45
Galv. water	50	32½	27½	30	37½	40
Galv. steam	45	27½	22½	25	32½	35

C.I.—HALF-ROUND GUTTERS—London Prices ex Works

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/3½	11½d.	3½d.
3½ in.	1/4½	1/1½	3½d.
4 in.	1/6	1/3	3½d.
4½ in.	1/7½	1/4½	4½d.
5 in.	1/10½	1/6½	5½d.

O.G. GUTTERS.

3 in.	1/8	1/4½	3½d.
3½ in.	1/8	1/4½	3½d.
4 in.	1/9½	1/4½	3½d.
4½ in.	1/11½	1/7½	4½d.
5 in.	2/4½	1/10½	5½d.

RAIN-WATER PIPES, &c.

Per yd. in 6 ft.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in. plain	1/10½	1/3	1/9½
2½ in. ,,	2/0½	1/4½	2/1½
3 in. ,,	2/6	1/9	2/7½
3½ in. ,,	2/11½	2/0½	3/0½
4 in. ,,	3/5	2/6½	3/8½

L.C.C. COATED SOIL PIPES—London Prices ex Works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
2 in. per yd. in 6 fts. plain	3 3	2 4½	2 10
2½ in. ,,	3 9	2 7½	3 7
3 in. ,,	4 6	2 10	4 2½
3½ in. ,,	4 11½	3 7	4 11½
4 in.	5 5½	4 0½	5 9

L.C.C. COATED DRAIN PIPES—London Price ex Works

	Bends, Pipe, angles, stock angles.		Branches, stock angles.	
	s. d.		s. d.	
3 in. per yd. in 9ft. lengths	4 4	5 1	8	0½
4 in. ,, ,,	4 10	5 8	10	0
5 in. ,, ,,	6 6	10 10	17	1
6 in. ,, ,,	6 8	13 2	21	9

Gaskin for jointing, 38/6 per cwt.

IRON—	Per ton in London. £ s. d.		£ s. d.
Common bars	11 0 0	to	12 0 0
Staffordshire Crown Bars—Good merchant quality	11 10 0	to	12 10 0
Staffordshire Marked Bars	14 0 0	...	15 0 0
Mild Steel Bars	10 0 0	...	11 0 0
Steel Bars, Ferro-Concrete quality, basis price	10 0 0	...	11 0 0
Hoop iron, basis price	11 10 0	...	12 10 0
,, Galvanised	27 0 0	...	28 0 0
Soft Steel Sheets, Black—			
Ordinary sizes, to 20 g.	13 0 0	...	14 0 0
,, ,, ,, 24 g.	14 0 0	...	15 0 0
,, ,, ,, 26 g.	16 0 0	...	17 0 0
Sheets Flat Best Soft Steel, C.R. and C.A quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 0 0	...	16 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	16 0 0	...	17 0 0
Ordinary sizes, 6 ft. by 2ft. to 3 ft. to 26 g.	18 0 0	...	20 0 0
No. 1 quality £4 per ton extra.			
Flat and Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 9 ft. to 20 g.	16 10 0	...	17 0 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	17 0 0	...	18 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	20 0 0	...	21 0 0
Sheets Galvanised Flat, Best quality—			
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	21 0 0	...	22 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	23 0 0	...	25 0 0
Best Soft Steel Sheets, 26 g.	24 10 0	...	25 10 0
Cut Nails, 2 in. to 6 in.	18 0 0		
(Under 3 in. usual trade extras.)			

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet, English, 4 lb. and up	30 0 0
Pipe in coils	30 10 0
Soil pipe	33 10 0
Compo pipe	34 10 0

NOTE.—Country delivery, 20s. per ton extra; lots under 3 cwt. 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 5s. cwt. extra.

Old lead, ex London area, at Mills ..... per ton 20 5 0

COPPER.

	s. d.
Seamless Copper tubes (basis) per lb.	1 1½
Strong sheet ,,	1 0
Thin ,,	1 1
Copper nails ,,	2 3
Copper wire ,,	2 4

PLUMBERS' BRASS WORK.
Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.
½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
29/- 45/- 76/- 153/- 246/- 510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.
½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
41/6 62/- 92/- 174/- 300/- 588/- per doz.

RIVER PATTERN SCREW DOWN MAIN FERRULES.
½ in. ¾ in. 1 in.
39/6 60/- 116/6 per doz.

CAPS AND SCREWS.
1¼ in. 1½ in. 2 in. 3 in. 3½ in. 4 in.
7/6 10/- 14/- 23/- 30/- 42/- per doz.

DOUBLE NUT BOILER SCREWS.
½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
7/6 11/- 17/- 29/- 36/- 63/- per doz.

BRASS SLEEVES.
1½ in. 2 in. 3 in. 3½ in. 4 in.
10/- 12/- 20/- 24/- 31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.
½ in. ¾ in. 1 in. 1¼ in. 1½ in.
35/- 56/- 98/- 162/- 228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.
1½ in. 1¼ in. 2 in. 3 in.
8 lbs. P. traps ... 33/- 41/- 56/- 101/- per doz.
8 lbs. S. traps ... 35/- 45/- 66/- 126/- ,,

TIN.—English Ingots, 2/6 per lb. SOLDER.—Plumber's 1/1, Tinmen's 1/4, Blowpipe 1/5 per lb.

PAINTS, &c.

			s. d.
Raw Linseed Oil, in pipes	per gallon		0 2 8
,, ,, ,,	in barrels ...	,,	0 2 10
,, ,, ,,	in drums ...	,,	0 3 0
Boiled ,, ,,	in barrels ...	,,	0 3 0
,, ,, ,,	in drums ...	,,	0 3 3
Turpentine in barrels		,,	0 4 3
,, in drums (10 gals)		,,	0 4 5
Genuine Ground English White Lead, per ton			52 0 0

(In not less than 5-cwt. casks.)
Extra for 1-cwt. kegs over 5-cwt. casks is 5/9 cwt.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*)

PAINTS, &c. (*contd.*)

GENUINE WHITE LEAD PAINT.

		£	s.	d.
"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J." Brand, and other best brands (in 14 lb. tins) not less than 5 cwt. lots ..	per ton delivered	70	10	0
Red Lead, Dry (packages extra) ..	per ton	39	10	0
Best Linseed Oil Putty	per cwt.	0	15	0
Filicol	"	0	15	6
Size, XD quality	fkn.	0	3	6

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per ft.		Per ft.
15 oz. fourths ..	2½d.	32 oz. fourths	6½d.
15 „ thirds ..	3½d.	32 „ thirds	8½d.
21 „ fourths ..	3½d.	Obscured Sheet, 15 oz.	3½d.
21 „ thirds ..	4d.	„ „ 21 „	4½d.
26 „ fourths ..	4d.	Fluted, 15oz.6½d., 21oz.	9d.
26 „ thirds ..	6½d.	En'lled, 15 oz. 4½d.,21oz.	6d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES.

	Per ft.
⅛ Rolled plate	4½d.
¼ Rough rolled	5½d.
½ Rough rolled	5½d.
Figured Rolled, Baltic, Oceanic, Arctic Stippolyte, and small and large Flemish White ..	5½d.
Ditto, tinted	8½d.
Rolled Sheet	4½d.
White Rolled Cathedral	4½d.
Tinted do.	6½d.

Cast plate is same price as rough rolled.

VARNISHES, &c.

		Per Gallon. £	s.	d.
Oak Varnish	Outside	0	14	0
Fine ditto	ditto	0	16	0
Fine Copal	ditto	0	18	0
Pale Copal	ditto	1	0	0
Pale Copal Carriage	ditto	1	4	0
Best ditto	ditto	1	12	0
Floor Varnish	Inside	0	18	0
Fine Pale Paper	ditto	0	18	0
Fine Copal Cabinet	ditto	1	2	6
Fine Copal Flatting	ditto	1	0	6
Hard Drying Oak	ditto	0	18	0
Fine Hard Drying Oak	ditto	0	19	0
Fine Copal Varnish	ditto	1	0	0
Pale ditto	ditto	1	2	0
Best ditto	ditto	1	12	0
Best Japan Gold Size		0	12	6
Best Black Japan		0	10	6
Oak and Mahogany Stain (water)		0	12	0
Brunswick Black		0	7	6
Berlin Black		0	14	0
Knotting (patent)		1	5	0
French and Brush Polish		0	17	0
Liquid Dryers in Terebine		0	9	0
Cuirass Black Enamel		0	7	9

BOOK REVIEWS

Private Companies: Their Utility and the Exemptions They Enjoy. By HERBERT W. JORDAN. London: Jordan & Sons, Ltd., Chancery-lane, W.C. 2. Price 1s. 9d., post free.

That this little book should have gone into a thirteenth edition is sufficient indication of its usefulness. The author gives in simple language a comprehensive summary of the law relating to the subject, and the procedure necessary to the formation of a private company, together with duties and fees payable on incorporation. The book is full of useful advice and suggestions.

Modern Methods of Concrete Making. By A. E. WYNN, B.Sc., A.M.Am.Soc.C.E., and EWART S. ANDREWS, B.Sc., M.Inst. C.E. (London: Concrete Publications, Ltd.) Price 1s. net.

In this booklet the authors explain in simple language the latest developments in scientific concrete making, and have applied the cement-water ratio method of proportioning to standard British Portland cements. The cement-water ratio theory of proportioning concrete is based on the well-proved fact that, other things being equal, the strength of concrete depends entirely upon the quantity of mixing water, and that unless a strict control is kept on water the strength intended when, say, a 1 : 2 : 4 mix is specified, will not necessarily be obtained. Excess water can, in fact, reduce concrete strengths by as much as 50 per cent. as compared with the amount of water required for maximum strength. The authors give tables and curves from which the strengths of concrete can be pre-determined and kept uniform throughout a building by varying the cement-water ratio. Tables are given showing the quantities of water necessary for different purposes.

NEW BUILDINGS IN SCOTLAND

Dumbarton.—HOUSING.—Plans have been passed by the Dean of Guild Court for the erection of 60 additional houses, the seventh development of the Town Council's scheme. The new houses will be erected on the ground acquired by the Council at Brucehill, off Cardross-road. There will be 28 houses of two apartments, 24 of three apartments, and eight of four apartments.

East Lothian.—ROADS.—The East Lothian County Council has approved of a recommendation to widen and improve the coast road from Cockenzie and Port Seton burgh boundary to Seton Dean, at an estimated cost of £1,417; to widen and improve the mid road (first class) from Meadowmill to Longniddry Station, and to the foot of the Lyars-road, at an estimated cost of £21,714; to widen and improve the mid road (second class) at Ballencrieff crossroads and eastwards towards Mungoswells, at an estimated cost of £7,602, making a total of £30,733.

Edinburgh.—AERODROME.—The acquisition of Tunhouse as a municipal aerodrome is being discussed by a sub-committee of the Lord Provost's Committee of Edinburgh Town Council.

Edinburgh.—CHURCH.—A new United Free Church, estimated to cost approximately £50,000, is to be erected in Edinburgh at a site where Blackford-avenue, West Savile-terrace, and Charterhall-road meet.

Full warrants granted at the Court included the following:—

A. Forbes—bungalow off Craigleith-gardens, and villa and garage at the corner of House o' Hill-avenue and Queensferry-road, Blackhall; J. Livingstone and Co.—nine double villas at Drumbrae, Barnton; J. D. MacArthur—21 lock-ups at Gorgie House, Gorgie-road; T. L. Rae and Co.—four double bungalows in Priestfield-road.

Glasgow.—SCHOOLS.—The minutes of the Property Committee of the Education Committee, which have been approved, contained references to a number of new schools which it is proposed to erect in the city. Accommodation, it was stated, has been acquired at the Possil (Parkhouse), Balmore (Parkhouse), Hamiltonhill, Ruchill, and King's Park housing schemes, and in the case of Hamiltonhill and Ruchill, and also Knightswood, the sketch plans have been provisionally approved by the Scottish Education Department. Approval has also been given to sketch plans for St. Thomas's (new) R.C. school, a temporary annexe to St. Roch's R.C. school, a temporary school for Eastbank Secondary and St. Paul's (Shettleston) schools, and to the site for a proposed extension to Possil School, and alterations to the New Hillhead High School.

Hilton.—SCHOOLS.—The Aberdeen Education Authority have sanctioned the borrowing of £3,314 towards providing a site for the erection of two schools at Hilton. The question of school accommodation in the north-east district of the city has also been considered by the Primary and Intermediate Schools Management Committee, who report that, in view of the Town Council's housing schemes at Pittodrie and near School-road, the situation, as it affected the school accommodation of the district, should be reviewed without delay.

Huntly.—HOUSES.—Plans and specifications of blocks of four three-roomed, flatted houses to be erected on East Park Street, have been approved by the Town Council.

Milngavie.—SHOPS.—The Milngavie Dean of Guild Court has granted plans on behalf of Mr. R. K. M. Lindsay, builder, 137, Merrylee-road, Cathcart, to erect nine blocks of semi-detached houses comprising 18 houses of five apartments each on vacant ground of the housing scheme on the west side of the road at Craigton-avenue. Other linings granted were:—The City Bakeries, Ltd.—to take down the property known as "The Auld Hoose," at the corner of Douglas-street and Main-street, and erect a new property consisting of four shops, with tearoom above, together with cloakroom and lavatory accommodation.

Rhynie.—HOSPITAL.—A scheme for a hospital for Rhynie has been approved by the Court of Session.

BUILDING TRADE WAGES IN SCOTLAND.*

THE following are the present rate of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers—Masons'‡; Bricklayers'‡; Plasterers'†
Aberdeen	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Airdrie	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Alexandria	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Arbroath	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/5½	1/1
Ayr	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Bathgate	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2 to 1/3
Blairgowrie	1/7	1/7	1/7	1/7½	1/5	1/7	1/4	10d. to 1/-
Bo'ness	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Coatbridge	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Dumbarton	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1,2½
Dumfries	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/6½	1/2
Dundee	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3 †1/2½
Dunfermline	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	‡1/2½ †1,2½
Edinburgh	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3½ †1,2½
Falkirk	1/7½	1/7½	1/7	1/8	1/7	1/7	1/6½	1/2½
Fort William	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2
Galashiels	1/6½	1/7	1/6½	1/7	1/6½	1/6½	1/7	1/2
Glasgow	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Greenock	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	1/2½
Hamilton	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2
Hawick	1/7	1/7	1/7	1/7-1/7½	1/7	1/7	1/7	1/2½
Helensburgh	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	1/2½
Inverness	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/- to 1/2
Kilmarnock	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Kirkcaldy	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1,2½
Kirkwall	1/5	1/5	1/4	1/5	1/5	1/4	1/4	1/-
Lanark	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Leith	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3½ †1/2½
Motherwell	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Perth	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Stirling	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Stirlingshire (Eastern District)	1/7½	1/9	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Wishaw	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 262.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	0
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundation 1 to 6	per yard cube	38	0
Add if in underpinning in short lengths	" "	7	0
Add if in floors 6 in. thick	" "	3	3
Add if in beams	" "	3	9
Add if aggregate 1 : 2 : 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	6

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	32	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	10	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

		s.	d.
Neat flat struck or weathered joint	" "	0	0	3

ARCHES.

		s.	d.
Extra only to the price of ordinary brickwork :—			
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

		s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	" "	9	6
Three-quarter-inch on flats in two thicknesses	" "	6	3
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	2

MASON.

		s.	d.
York stone templates fixed	per foot cube	13	0
York stone sills fixed	" "	22	0
Bath stone and all labour fixed	" "	10	6
Beer stone and all labour fixed	" "	15	0
Portland stone fixed	" "	20	0

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	5	0
Do. joists	" "	5	6
Do. roofs, floors and partitions	" "	6	0
Do. trusses	" "	8	6

		⅞"	1"	1½"	2"
Deal rough close boarding	per sq.	35/6	40/-	45/-	72/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	0	11
Centre for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

		⅞"	1"	1½"	1½"
Deal-edges shot	per sq.	—	44/6	53/-	60/6
Do. tongued and grooved	"	—	49/-	57/6	65/-
Do. matchings	"	45/-	51/-	—	—
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/-	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal-cased frames with 1 in. inner and outer linings, 1¼ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights ; average size	" "	3	9

DOORS.

		1¼"	1½"	2"
Two-panel square framed	per ft. sup.	2/1	2/4	2/6
Four-panel Do.	"	2/5	2/8	2/11
Two-panel moulded both sides	"	2/8	2/11	3/2
Four-panel Do. Do.	"	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	"	1/4	1/6	1/9
Add if cross-tongued	"	2d.	2d.	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail : average, 3 in. × 3 in.	" "	6	0
Add if ramped	" "	12	0
Add if wreathed	" "	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	16	3
Plain compound girders	"	19	0
Do. stanchions	"	21	9
In roofwork	"	27	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/6	1/9	2/-	2/6
Ogee Do. Do.	"	1/9	2/-	2/6	3/3
Rain-water pipes with ears	"	1/9	2/7	—	—
Extra for shoes and bends	each	4/4	5/11	—	—
Do. stopped ends	"	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	43	0
Do. Do. in flats	"	42	0
Extra labour and solder in coated cesspools	each	6	9
Welf joint	per ft. run	0	6
Soldered seam	" "	1	3
Copper nailing	" "	0	3

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste	per ft. run	1/2	1/9	2/-	3/4	4/-	—
Do. service	"	1/8	2/2	2/7	3/10	—	—
Do. soil	"	—	—	—	—	—	6/9
Bends in lead pipe	each	—	—	—	—	3/3	8/2
Soldered stop ends	"	1/2	1/8	2/1	2/10	3/6	—
Read lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	"	—	—	—	14/7	19/6	—
Bib cocks and joints	"	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints	"	15/4	17/2	25/8	64/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	6
Do. Do. Sirapite	" "	2	9
Do. Do. Keen's	" "	4	0
Add saw lathing	" "	1	7
Add metal lathing	" "	2	6
(Not including hangers or runners, etc., for suspended ceilings.)			
Portland cement screed	" "	2	2
Do. plain face	" "	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	6

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	8½
26-oz. Do.	" "	1	0
Obscured sheet	"	1	1
¼-in. rolled plate	" "	0	9
¼-in. rough rolled or cast plate	" "	0	10½
¼-in. wired cast plate	" "	1	4

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece, 2/- to 4/-		

* These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TRADE NEWS

Wall-boarding.

A booklet issued by the Thames Board Mills, Ltd., descriptive of their wall-boarding, "Essex" board, gives some indication of the great practical possibilities of this material for various lining purposes. For example, this lining has been used at Taunton's School, Southampton, for the ceilings throughout; at Portsmouth electricity offices for panelling; for factories, schoolrooms, cafés, shops, warehouses, etc.; indeed, for all buildings where a firm and rigid material which gives a proper insulation and is adaptable for decorative treatment is required. The booklet is freely obtainable from the company at Purfleet, Essex.

Refrigeration in the Home.

In blocks of flats just completed in St. John's Wood and Westminster, besides the installation of most up-to-date plumbing, each flat has been equipped with a "Frigidaire" cabinet. Automatic electrical refrigeration for the maintenance of pure food is becoming more and more a necessity in modern homes, and it is possible that before long this improvement in living conditions will become more general.

Scaffolding.

Scaffolding (Great Britain), Ltd., Lansdowne-road, Stockwell, have issued a new catalogue calling attention to their patent suspended scaffolding. Merits claimed for this system are safety, convenience, economy, and general adaptability to a wide variety of uses and purposes, and certainly the list of big contracts on which this type of scaffolding has been used would seem to bear out this claim. Contracts include: The Hudson Bay Building, E.C.3; Stratton House, W.1; "Lloyd's," E.C.3; Barking Power Station; County Fire Offices, W.1; Bush House; and many others. Useful diagrams for installation purposes are included in the catalogue, for which every architect and contractor should make application.

Cement Organisation's Dinner.

The members of the London staffs of companies comprising the Red Triangle Cement Organisation were entertained to a dinner and concert at the Connaught Rooms recently by the chairman and directors of the Portland Cement Selling and Distributing Co., Ltd. Mr. Henry S. Horne presided over a gathering which numbered nearly 450. The loyal toast was proposed by the chairman, after which Mr. John Ames proposed the toast of "The Chairman and Directors of the Red Triangle Organisation." He spoke on the question of better relationship between employers and employed, and then went on to say that the Red Triangle Cement Organisation was young—less than two years old—but the work of everyone had helped to make it one of the most successful in the country, and it was in their hands, however humble their position might be, to maintain that success and carry forward to greater triumphs. The chairman, in reply, said that he and his fellow directors realised their great responsibility. In any industry these days the difficulties were very great—the problems had to be faced, as were the problems on the war, by everyone working together to one end. He looked upon the company present not as employers and employed, but as one complete unit, to meet as one successful body the problems they had to face in common.

Mr. Oliver J. S. Piper (managing director) also replied.

Illuminated Signs.

From Messrs. Nash & Hull, Ltd., of 87, New Oxford-street, W.C.1, we have received, in the form of a catalogue, details of their illuminated signs, particular attention being drawn to the "Flexlume" lettering type—of which the firm in question is the sole concessionaire for this country. This type of letter is of American origin and is adaptable to most forms of illuminated signs. It has two very distinct advantages—readability from almost any angle by reason of its projection from the metal background, and economy of maintenance. Another advantage is interchangeability, which makes it peculiarly adaptable to use in theatre canopies. Neon signs are also shown in mountings which are different from the ordinary, and with animated displays and cornice lighting the whole field is fairly well covered in the catalogue in small space.

Three Appointments.

Mr. H. J. Parker, late London manager of a well-known decorative firm, has now joined the staff of Hampton & Sons, Ltd., of Pall Mall East, S.W. Mr. Parker was for 27 years with his late firm, and carried out, in the United Kingdom, America, Australia, India, and other parts of the world, many large contracts for important buildings, both public and private.

It is announced by the Ioco Rubber and Waterproofing Co., Ltd., that Mr. E. J. Kirkland has been appointed sales representative for the whole of Yorkshire, with headquarters at Leeds, and Mr. J. Curran as sales representative for Liverpool and North Wales territory, with his headquarters at Liverpool.

Hospital Equipment.

From Messrs. James Gibbons, Ltd., St. John's Works, Wolverhampton, comes a very comprehensive catalogue of hospital equipment—an issue which will be of value to the architect engaged in hospital work. Three factors, cleanliness, airiness, and daylight, influence hospital design to-day from the point of view of planning, but a further point that the architect remembers is the task of lightening the burden of manual labour that attaches to nursing and maintenance. The metal worker, with rollered trolleys, lifting gear, "balanced" and cleanable windows, untarnishable metals, and washable surfaces, has found opportunity here. We learn that Messrs. Gibbons have taken a very active interest in this side, and that they have fitted up—in conjunction with architects—no less than 140 hospitals in Great Britain alone. Architects should send for the catalogue—they will find it of use.

Woodworking Machinery.

Under this title Messrs. Wadkin and Co. have issued a catalogue illustrating and describing the wide range of woodworking plant in which they specialise. It should be impossible for any enterprising woodworker, builder, or contractor to fail to find in this issue some piece of plant which will help them to better and more economical production. Band sawing machines, bench planers, boring and mortising machines, lathes, saw benches, thicknessing machines, tenoners—there is something to interest every wood worker. Especially helpful is the specification that is to be found opposite the illustration of every piece of plant. Application to the company at Green-lane Works, Leicester, will bring a copy by return.

A Staff Function.

The seventh annual dinner and concert of the indoor and outdoor staffs of Messrs. Francis Polden & Co., Ltd., electrical contractors, of 56, Cannon-street, E.C., was held on January 19 at Anderton's Hotel, under the chairmanship of Mr. Francis C. Polden, C.C., when a very enjoyable evening was spent. One of the speakers, during the course of the evening, referred to the company's name for high-class work, and the chairman congratulated the staff upon this.

Casements and Leaded Lights.

Architects who have special designs for metal casements and leaded lights, or wish to have designs submitted to them, will be interested to hear of the considerable extensions in this department of Messrs. George Farmiloe & Sons, Ltd., well known for their admirable stained-glass work. The list of their recent contracts for casements and leaded lights include:—Westminster Cathedral; Victoria and Albert Museum; Bio-Chemistry Laboratory, Oxford; Christ's Hospital, Horsham, etc. Architects should write to 34, St. John-street, E.C.1, for full information.

Employees as Shareholders.

It is interesting to note that the Brilliant Sign Co., Ltd., incorporating Stanley Jones and Co., Ltd., shopfitters, have recently introduced the co-operative system throughout their works, offices and branches, by allotting to 37 departmental chiefs a block of 10 per cent. fully paid £1 preference shares, the managing director personally guaranteeing the 10 per cent. dividend, and agreeing in the event of a public flotation—recently an offer of 30s. per £1 share was refused—to pay to the holders the difference between par value and the amount received, with the scrip sent to the 37 recipients. The managing director, we learn, expressed a wish that they might consider they were working *with* him and not *for* him, thus ensuring their loyal efforts being reflected in the future success of the businesses.

Reinforced Paving.

Mr. W. J. Bennett, of the "Zeta" Wood Flooring Co. (1910), Ltd., has taken out a patent for a new wood flooring, called "Tungsec," for roads. The blocks used for this system are fitted at one end with a cross tongue which projects beyond either side of the block, and at the other end a groove. The length of the projection at the side determines the width of the joint for purposes of grouting in or bonding the blocks, and thus the paving can be laid mathematically accurate. A further development of the patent is the grooving on both sides as well as one end. By this method the end of the tongue rests in the groove on the side of the next block and forms an additional bond between the blocks, each block thus being joined up with the four surrounding blocks. Yet only one tongue is used on each block. Since the tongues and grooves are set low in the block, there is a greater proportion of wood for wearing purposes, and when the ease of laying and bonding is considered, the system represents road paving at a very economical price.

Mr. Bennett is prepared to entertain licences from firms of standing for the manufacture and laying of blocks on this system.

A Decoration Exhibition.

A display is being given just now, and will continue until February 16, of a new plastic relief decoration, "Surfex." The exhibition is at the Hotel Russell, W.C. (Room 140), and is by Messrs. Lewis Berger & Sons, Ltd., of Homerton, E.9. Briefly, "Surfex" is a composition powder which, by the addition of water, is made into a paste and applied by brush on to any substance or surface it is desired to decorate. A variety of texture designs, at the discretion of the decorator, is then obtained by manipulating the brush, or by stippling on with the hand itself or any desired means. By the application of colours and by smoothing down the patterns thus raised, combinations of colour and texture that are quite unusual may be obtained. We understand that the results are absolutely permanent and so should be of the greatest interest to those concerned with the erection of theatres, cinemas, dance-halls, hotels, shops, as well as for domestic work. Architects and others should call, or send for full information on the subject. The product, we learn, is entirely British.

Wages Bags.

Messrs. J. C. King, Ltd., of 42-60, Goswell-road, E.C.1, have issued a catalogue-set containing specimens of their seed bags and printed wages bags which is likely to be of practical value to builders and contractors. Such wages bags more than repay their cost in accuracy and time saved, and a copy of the catalogue should be obtained by all interested. Messrs. King also have a large and varied stock of time-sheets, which may also be inspected by means of a catalogue-set.

TENDERS

* Denotes *accepted.*

† Denotes *provisionally accepted.*

‡ Denotes *recommended for acceptance.*

§ Denotes *accepted subject to modifications.*

Aston.—Concrete retaining wall and fence at the sewage pumping station, Warple-way, Acton, W.3, for the B.C. Mr. R. W. G. Cross, Borough Engineer:—

Shelbourne & Co., Ltd.	£1,037 1 7
Somerville & Co., Ltd.	1,031 0 0
G. P. Trentham, Ltd.	998 0 0
Bierrum & Partners	980 0 9
Gibson & Sons	948 17 0
London Construction Co.	931 16 0
Mears Bros.	874 18 6
H. Morecroft	854 0 0
H. E. West	827 0 0
H. Boyer, Ltd.	805 10 0
Garret & Son, Ltd.	810 0 0
Muirhead & Co.	799 14 6
Hodges & Porter	780 0 0
Lester Construction Co.	762 0 0
Dixon & Sons	697 4 5
*A. F. Farr	687 18 6

Bairathery.—Repairs to cottages, for the R.D.C.:—

Balbriggan district—

*Lynch & Co.	£167 9
*Malahide	224 3
Swords	146 13

Kinsallaghan—

Chr. Geraghty	259 17 6

Lusk—

*Joseph Clarke	£126

Beath.—Additions to Beath R.C. secondary school, for the Fife E.C. Mr. G. Sandilands, Architect, Education Offices, Kirkcaldy:—

Mason—	
*R. Coll, Dunfermline	£342 19 3
Joiner—	
*J. Reid, Crossgates	750 19 9
Plasterer—	
*W. Kennedy, Cowdenbeath	127 12 8
Slaters—	
*J. Robertson & Sons, Dunfermline	104 18 7
Plumber—	
*D. Thomson, Cowdenbeath	137 16 1
Painters—	
*A. Ferguson & Son, Cowdenbeath	99 15 7
*The Caledon & Shipbuilding & Engineering Co., Dundee	133 11 3
Heating engineers—	
*Taylor & Fraser, Glasgow	126 12 0
Electricians—	
*Scott & Co., Dunfermline	138 9 5

Bedford.—6 houses in Bromham, and for 8 in the parish of Stevington, for the R.D.C.:—

Bromham, 6 houses—	
*A. Beaumont, Henlow	£1,893 12 0
Stevington, 8 houses—	
*Seymour Bros. & Tookey, Stotfold	2,722 19 6

Belfast.—New church, for the Belfast Church Commission:—

*Courtney & Co., Belfast	£11,524

Bingley.—Twenty-four houses at Cottingley, for the U.D.C. Mr. E. O. Robinson, A.R.I.B.A., architect, Town Hall:—

Mason—
*A. Sharp, Ltd., Keighley.
Joiner—
*E. Johnson, Halifax.
Plumber—
*H. Stubbs, Bradford.
Plasterer—
*E. Jowett, Bradford.
Painter—
*E. Hey, Bingley.
Electrician—
*L. S. Dyer, Bingley.
Slater—
*Geo. Wilkinson, Bradford.
Metal windows—
*Crittall Manufacturing Co., Ltd., Braintree.

Birkenhead.—New Work Shops and General Offices, on the Gas Works estate, Birkenhead, for the Corporation. Mr. H. E. Stone, Gas Engineer, Gas Works, Thomas-street:—

Demolition of existing buildings, clearing of site, and all builders' work and fittings—
*J. A. Milestone & Son, Ltd., Wallasey £7,672
Reinforced concrete buildings—
*W. H. Brocklesby, Birkenhead £9,186

Bramhall (Ches.).—New vestries at the Bramhall Parish Church, for the Parochial Church Council. Messrs. J. & J. H. Gibbons, FF.R.I.B.A., architects, 4, St. Mary's Parsonage, Manchester:—

*Tinker & Young, Ltd., Manchester	£2,000

Bristol.—Extensions to the switchhouse at Feeder-road Works, for the Electrical Committee:—

*C. Hayes & Sons, Bristol.	

Brookwood.—Roads and sewers, at the Mental Hospital, for the Surrey C.C. Mr. F. J. Hodgson, L.R.I.B.A., architect, 201, High Street, Guildford:—

*Building & Public Works Construction Co., Swindon	£6,349

(Accepted, subject to approval by the Board of Control.)

Brookwood.—Proposed extension to nurses' home, at the Mental Hospital, for the Surrey C.C. Mr. F. J. Hodgson, L.R.I.B.A., architect, 201, High-street, Guildford:—

S. E. Moss & Sons, Chelmsford	£6,446
Guildford & District Guild of Builders, Guildford	5,890
H. Mullins, Woking	5,872
Higlett & Hammond, Guildford	5,660
F. D. Winn & Co., London	5,610
J. McLean Keil, Camberley	5,600
J. W. Ellingham, Ltd., Dartford	5,590
F. and H. F. Higgs, Cobham	5,555
Blackwell & Meyer, Bexley Heath	5,500
Inticknap Bros., Wormley	5,475
Rowland Bros., Horsham	5,472
W. G. Tarrant, Ltd., Byfleet	5,444
Mullen & Lumsden, London	5,439
A. E. Jones, Woking	5,431
H. J. A. Wright, Ltd., Great Missenden	5,410
James Bodle, Ltd., Eastbourne	5,349
G. F. Drowley, Woking	5,345
Limpus & Son, Kingston	5,306
Mussellwhite & Sons, Basingstoke	5,299
H. H. & F. Roll, Epsom	5,280
Parrys (Ealing), Ltd., Ealing	5,271
Tribe & Robinson, Guildford	5,258
W. Moss & Sons, Ltd., Cricklewood	5,224
H. G. & A. Osman, Oxshott	5,210
Warren & Son, Cranleigh	5,200
Andersons, Ltd., Kingsway	5,187
G. H. Deane & Son, London	5,180
Crosby & Co., Farnham	5,173
Pitcher Construction Co., Hornsey	5,169
D. Fry & Sons, Godalming	5,168
A. Carter, Ltd., Luton	5,160
Gee, Walker & Slater, London	5,160
E. H. Cummins & Co., Dorking	5,158
H. Lacey & Sons, Luton	5,120
Chapman, Lowry & Puttick, Haslemere	5,104
R. Wood & Son, Guildford	5,100
W. Townson & Sons, Bolton	5,076
G. Kemp Stroud & Co., Aldershot	5,072
W. H. Gaze & Sons, Kingston	5,062
Ashford Builders Co., London	5,008
R. Mansell, Croydon	4,978
Pool & Sons, Hartley Wintney	4,960
F. Milton & Sons, Witley	4,957
Wheeler Bros. (Reading), Ltd.	4,916
Running & Fitton Adams, Godalming	4,900
Hoskins & Pond, Newbury	4,823
*Building & Public Works Construction Co., Swindon	4,799

(Accepted, subject to approval by Board of Control.)

Brookwood.—Proposed parlour cottages at the Mental Hospital, for the Surrey C.C. Mr. F. J. Hodgson, L.R.I.B.A., architect, 201, High-street, Guildford:—

H. Mullins, Woking *(Parlour and non-parlour)*	£6,512 0 0
S. E. Moss & Sons, Chelmsford	4,719 9 0
J. W. Ellingham, Ltd., Dartford	4,580 0 0
W. Townson & Son, Bolton	4,554 0 0
F. & H. F. Higgs, Cobham	4,444 0 0
Blackwell & Meyer, Bexley Heath	4,400 0 0
Mullen & Lumsden, London	4,393 0 0
Pitcher Construction Co., Hornsey	4,329 0 0
Guildford & District Guild of Builders, Guildford	4,230 0 0
Limpus & Son, Kingston	4,156 0 0
H. G. & A. Osman, Ltd., Oxshott	4,089 0 0
W. Moss & Son, Ltd., Cricklewood	4,070 11 9
A. H. Jones, Woking	4,062 0 0
G. H. Deane & Son, London	4,060 0 0
G. F. Drowley, Woking	4,035 0 0
H. J. A. Wright, Ltd., Great Missenden	4,025 0 0
A. Caesar & Sons, Liphook	4,020 0 0
Higlett & Hammond, Guildford	4,009 0 0
J. McLean Keil, Camberley	3,995 0 0
Perrys (Ealing), Ltd., Ealing	3,992 0 0
Rowland Bros., Horsham	3,985 0 0
Wheeler Bros. (Reading), Ltd.	3,984 0 0
James Bodle, Ltd., Eastbourne	3,984 0 0
Mussellwhite & Sons, Basingstoke	3,956 0 0
Enticknap Bros., Wormley	3,945 0 0
Tribe & Robinson, Guildford	3,932 0 0
Crosby & Co., Farnham	3,929 0 0
Ashford Builders Co., London	3,925 0 0
H. H. & F. Roll, Epsom	3,893 0 0
Andersons, Ltd., Kingsway	3,844 8 0
F. Milton & Sons, Ltd., Witley	3,824 0 0
Gee, Walker & Slater, London	3,815 0 0
Chapman, Lowry & Puttick, Ltd., Haslemere	3,800 0 0
H. Lacey & Sons, Luton	3,760 0 0
W. G. Tarrant, Ltd., Byfleet	3,752 0 0
R. Wood & Son, Guildford	3,748 0 0
H. H. Cummins & Co., Dorking	3,700 0 0
A. Carter, Ltd., Luton	3,690 0 0
G. Kemp Stroud & Co., Aldershot	3,683 0 0
W. H. Gaze & Sons, Kingston	3,645 0 0
Hoskins & Pond, Newbury	3,621 11 0
J. M. Rutter & Co., Guildford	3,585 0 0
Church & Co., Lightwater	3,536 10 0
Childs & Shee, Woking	3,526 1 11
R. Mansell, Croydon	3,506 0 0
*Building & Public Works Construction Co., Swindon	3,299 0 0

(Subject to approval by the Board of Control.)

Brookwood.—Proposed Reception Hospital, at the Brookwood Mental Hospital, for the Surrey C.C. Mr. F. J. Hodges, L.R.I.B.A., architect, 201, High-street, Guildford:—

Limpus & Son, Kingston-on-Thames	£43,446
E. D. Winn & Co., London	36,500
Mullins & Co., Woking	36,190
Guildford & District Guild of Builders	36,100
Mullen & Lumsden, London	35,653
Higlett & Hammond, Guildford	35,435
J. McLean Keil, Camberley	35,400
J. W. Ellingham, Ltd., Dartford	35,280
H. J. A. Wright, Ltd., Great Missenden	34,998
James Bodle, Ltd., Eastbourne	34,890
A. E. Jones, Woking	34,818
Tribe & Robinson, Guildford	34,685
Blackwell & Meyer, Bexley Heath	34,500
G. F. Drowley, Woking	34,490
F. & H. F. Higgs, Cobham	34,443
G. H. Deane & Son, London	34,328
H. H. & F. Roll, Epsom	34,309
W. G. Tarrant, Ltd., Byfleet	34,145
Pitcher Construction Co., Hornsey	33,968
Andersons, Ltd., Kingsway	33,945
Wheeler Bros. (Reading), Ltd.	33,844
Rowland Bros., Horsham	33,584
W. Moss & Sons, Ltd., Cricklewood	33,459
E. H. Cummins & Co., Dorking	33,187
Perrys (Ealing), Ltd., Ealing	33,150
Chapman, Lowry & Puttick, Ltd., Haslemere	32,935
Mussellwhite & Sons, Basingstoke	32,773
W. H. Gaze & Sons, Ltd., Kingston-on-Thames	32,533
Warren & Son, Cranleigh	32,510
R. Wood & Son, Guildford	32,461
A. Carter, Ltd., Luton	32,400
Gee, Walker & Slater, London	32,337
D. Fry & Sons, Godalming	32,314
G. Kemp, Stroud & Co., Aldershot	32,310
Enticknap Bros., Wormley	32,296
H. Lacy & Sons, Luton	32,220
Pool & Sons, Hartley Wintney	32,069
Crosby & Co., Farnham	32,049
F. Milton & Sons, Ltd., Witley	32,024
Bunning & Fitton Adams, Ltd., Godalming	31,977
Ashford Builders Co., London	31,875
R. Mansell, Croydon	31,873
H. G. & A. Osman, Ltd., Oxshott	31,472
Building & Public Works Construction Co., Swindon	31,199
Hosking & Pond, Newbury	31,188
*W Townson & Sons, Bolton	30,546

(Accepted, subject to approval by the Board of Control.)

Brookwood.—Proposed non-parlour cottages, at the Mental Hospital, for the Surrey C.C. Mr. F. J. Hodgson, L.R.I.B.A., architect, 201, High-street, Guildford:—

H. Mullins, Woking *(Parlour and non-parlour)*	£6,512 0 0
S. E. Moss & Sons, Chelmsford	3,937 0 11
J. W. Ellingham, Ltd., Dartford	3,800 0 0
F. & H. F. Higgs, Cobham	3,750 0 0
Mullen & Lumsden, London	3,636 0 0
Pitcher Construction Co., Hornsey	3,560 0 0
Blackwell & Meyer, Bexley Heath	3,560 0 0
A. E. Jones, Woking	3,534 0 0
Limpus & Son, Kingston	3,476 0 0
Rowland Bros., Horsham	3,423 0 0
H. J. A. Wright, Ltd., Great Missenden	3,422 0 0
W. Moss & Son, Ltd., Cricklewood	3,407 4 8
H. G. & A. Osman, Oxshott	3,401 0 0
Guildford & District Guild of Builders, Guildford	3,380 0 0
Wheeler Bros (Reading), Ltd.	3,333 0 0
Enticknap Bros., Wormley	3,330 0 0
James Bodle, Ltd., Eastbourne	3,320 0 0
G. F. Drowley, Woking	3,319 0 0
Tribe & Robinson, Guildford	3,304 0 0
Perrys (Ealing), Ltd., Ealing	3,301 0 0
Higlett & Hammond, Guildford	3,300 0 0
G. H. Deane & Son, London	3,300 0 0
J. McLean Keil, Camberley	3,295 0 0
Mussellwhite & Sons, Basingstoke	3,295 0 0
A. Caesar & Sons, Liphook	3,291 0 0
H. H. & F. Roll, Epsom	3,262 0 0
Ashford Builders Co., London	3,257 0 0
Crosby & Co., Farnham	3,235 0 0
F. Milton & Sons, Ltd., Witley	3,212 0 0
Chapman, Lowry & Puttick, Haslemere	3,200 0 0
Gee, Walker & Slater, London	3,170 0 0
W. Townson & Sons, Bolton	3,160 0 0
E. H. Cummins & Co., Dorking	3,152 0 0
R. Wood & Son, Guildford	3,129 0 0
W. G. Tarrant, Ltd., Byfleet	3,121 0 0
W. H. Gaze & Sons, Kingston	3,101 0 0
H. Lacey & Son, Luton	3,100 0 0
Andersons, Ltd., Kingsway	3,099 6 9
G. Kemp Stroud & Co., Aldershot	3,093 0 0
A. Carter, Ltd., Luton	3,090 0 0
Hoskins & Pond, Newbury	3,037 5 1
J. M. Rutter & Co., Guildford	2,995 0 0
Church & Co., Lightwater	2,932 7 0
R. Mansell, Croydon	2,915 0 0
Childs & Shee, Woking	2,892 13 1
*Building & Public Works Construction Co., Swindon	2,699 0 0

(Subject to approval by the Board of Control.)

Caerphilly (Glam.).—Installation of a low-pressure hot water heating apparatus at the Caerphilly New Boys' Secondary School, for the Glamorgan E.C. Mr. D. Pugh Jones, F.R.I.B.A., County Architect, County Hall, Cardiff:—
*J. C. Hitt & Sons, Bridgend £1,251 5

Crewe.—New works on Hungerford-road, for Messrs. Allen Liversedge, Ltd., 11, Fleece-road, Leeds. Mr. A. E. Sheunan, F.R.I.B.A., architect, 14, North John-street, Liverpool:—
*John Rimmer, Liverpool.

Croydon.—For works at "The Hermitage," Morland-road, for the C.B.:—

Poulton & Sons	£317 6 6
Cusden, E. G.	283 0 0
*Smith, Edwin	273 0 0

Cuddington.—2 houses in Higher-drive, Cuddington, for Mr. Wm. Way. Mr. Brian L. Sutcliffe, A.R.I.B.A., architect, 7, Duke-street, Wigmore-street, London, W.1:—

C. H. King	£4,472
W. H. Gaze & Sons	4,233
G. N. Watts, Ltd.	3,728
*A. M. L. McKay	3,433

Doncaster.—Super garage in Baker-street. Mr. H. Slater, architect:—
Main Contract—
*Thomson & Dixon (Doncaster), Ltd.
Asphalter—
*Northern Asphalte Co., Ltd., Leeds.

Dunstable.—Alterations and additions to Bigthan Works, Dunstable, for Messrs. Cross & Co., Ltd. Mr. H. A. Rolls, L.R.I.B.A., chartered architect, 15, Bridge-street, Leighton Buzzard:—

C. Miskin & Sons, St. Albans ...	£10,760
W. Watson, Dunstable	10,610
A. E. Dawson, Leighton Buzzard ...	10,520
T. Day & Sons, Luton	10,123
A. Carter, Luton	9,995
A. W. Oakley, Luton	9,994
W. Summerfield & Son, Dunstable ...	9,760
J. Tompkins & Sons, Luton	9,729
Robinson & White, Dunstable	9,707
*Fleet & Roberts, Aylesbury	8,800

Easington.—Internal painting at the Poor Law Institution, for the B.G. Mr. F. W. Girven, architect, Easington:—
*R. Robertson, East Boldon.

Farnworth.—10 houses in Fern-street, and 30 in Daffodil-road, for the U.D.C. Mr. F. Ashton, engineer and surveyor:—
Daffodil-road—
*J. L. Owen & Sons, Wilfred-road, Walkden.
Fern-street—
*S. Jones & Sons, Plodder-lane, Farnworth.

Halifax.—Electricity Sub-station at Moor End-road housing site, for the C.B. Borough Engineer:—
*Selwyn Highley, Halifax.

Halifax.—Demolition of property in Ovenden-street and erection of six lock-up shops, for the C.B. Borough Engineer:—
Mason—
*E. & S. Bower, Ltd.
Joiner—
*E. Johnson.
Plumber—
*J. Holdsworth.
Plasterer—
*Jas. Smith.
Electrician—
*Headon & Brennand.
(All of Halifax.)

Holmfirth.—56 houses, for the District Council:—
*Walter Dunk & Sons, Barnsley
per house £333

Ilford.—Alterations and additions to the "Royal Oak" public house, Green-lane. Mr. William Stewart, F.R.I.B.A., architect, Newlyn House, 4-5 Aldgate, E.1:—
*C. Foster & Sons, Smarts-lane, Loughton

Ipswich.—Elementary school in Gainsborough-road, for the E.C.:—
*Pollard & Skerritt, Ipswich.
(Subject to approval of M. of H.)

Kidderminster.—40 pairs of houses on the Sutton Farm estate, for the T.C.—
‡Edie Towers & Co., Wolverhampton.

Kingston-on-Thames.—Additions to 48, High-street. Mr. S. P. Anderson, architect, Creek House, High-street:—
‡Budd & Son, East-road.

Kingston-on-Thames.—Additions to works at Villiers-road, for Vine Products, Ltd. Mr. T. A. Harvey, architect, 25, Victoria-street, S.W.1:—
*W. H. Gaze & Sons, Ltd., High-street.

Leeds.—Bus depot in Wellington-street for the West Yorkshire Road Car Co., Ltd.:—
*W. Gott and Son.

Lewes.—New isolation wards at the Chailey Institution, for the B.G. Mr. H. J. Tillson, architect, West-street:—
Floors—
*Seigwart Fireproof Flooring Co., Ltd., London.
Patent glazing—
*Mellowes & Co., Ltd., Sheffield.

London.—New tool and store shed on the south side of Mary-place by Walmer-road, and the provision of suitable lavatory accommodation for workmen inside the present depot on the north side of the street, for the Kensington B.C.:—
‡Robert Mansell £384

London.—Repairs to the balustrade in front of the Buckingham Palace-road baths, for the Westminster City Council:—

Burton Bros.	£363 0
Walter Lilly & Co.	347 0
Army & Navy Co-operative Society, Ltd.	327 18
F. C. Hoskins & Co.	322 0
*Sims & Russell	319 0

London.—Rebuilding of the wall at the south-west corner of Horse and Dolphin-yard, and the renewal of the corrugated iron covering to the bathroom of the residence at the depot, for the Westminster City Council:—

F. C. Hoskins & Co.	£180
Walter Lilly & Co.	170
Burton Bros.	163
Army & Navy Co-operative Society, Ltd.	159
*Sims & Russell	148

London.—Rebuilding of the boundary wall between the Cemetery and 36, Uxbridge-road, Hanwell, for the Westminster City Council:—

Edward H. Brooks	£625
Sims & Russell	533
Walter Lilly & Co.	505
A. Jamieson & Son	466
*G. Holland & Sons	463

London.—Foundations of block 10 of dwellings on the Whitmore estate, Hoxton, for the L.C.C.:—

Arthur Logan	£3,888 0 0
W. Simms	3,806 18 0
Canonbury Construction Co., Ltd.	3,734 0 0
Rowley Brothers, Ltd.	3,672 0 0
J. & C. Bowyer, Ltd.	3,597 0 0
R. Woollaston & Co.	3,572 0 0
Demolition and Construction Co., Ltd.	3,555 0 0
Henry Hayes (Manchester), Ltd., Manchester	3,525 11 7
The Walker Weston Co., Ltd.	3,503 4 11
Howard Farrow, Ltd.	3,430 7 6
R. J. Rowley, Ltd.	3,295 0 0
R. Mansell	3,270 0 0
‡Henry Boot & Sons, Ltd.	3,123 3 6
Architect's estimate	3,387 0 0

London.—New Palais de Danse in Streatham Hill-road, S.W. Messrs. Trehearne & Norman, Windsor House, Kingsway, W.C., and Mr. George E. Tonge, Lord-street, Southport, architects. Quantity Surveyor, Mr. Hugh Watkins, 13, Gray's Inn-square, W.C.:—

Griggs & Son	£42,729
John Knox & Dyke, Ltd.	39,411
Thomas & Edge	37,700
Rice & Son, Ltd.	37,500
F. G. Minter, Ltd.	36,670
Bovis (1928), Ltd.	36,477
John Marsland & Sons, Ltd.	36,439
*Pitcher Construction Co., Ltd.	36,257
C. H. Gibson, Ltd.	35,995

London.—Rebuilding of the premises at 3-4, Houndsditch, E.C. Messrs. Lewis Soloman & Son, architects, 21, Hart-street, Bloomsbury, W.C.:—

James Carmichael (Contractors), Ltd.	£18,745
Patman & Fotheringham, Ltd.	17,965
Holloway Brothers (London), Ltd.	17,780
Mitchell & Son	17,580
Ashby & Horner, Ltd.	17,568
F. & H. F. Higgs, Ltd.	17,219
Horace V. Clogg	17,144
Henry Kent	17,137
Bovis (1928), Ltd.	17,067
C. P. Roberts & Co., Ltd.	16,900

London.—New church hall for the Holy Trinity Parochial Council, Barnes, S.W. Mr. Clifton R. Davy, F.R.I.B.A., architect, 7, Great James-street, Bedford Row, W.C.:—
*W. H. Gaze & Sons, Ltd., High Street, Kingston-on-Thames ... £3,887

London.—Large block of residential flats at north side of Oakwood-court, Kensington, S.W. Messrs. Richardson & Gill, FF.R.I.B.A., architects, 41, Russell-square, W.C.1:—
Building Work—
*John Knox & Dyke, Regent Street, W.
Steelwork—
*Redpath, Brown & Co., Ltd., London
Faience—
*Leeds Fireclay Company, Leeds.
Floors—
*J. A. King & Co., Ltd., London
Asphalte—
*Natural Rock Asphalte Co., London.

London.—Alterations to premises at 240a, Amhurst-road, for the Jewish Lads' Brigade:—
*Bovis (1928), Ltd., 43, Upper Berkeley Street, W. £1,521

London.—New students' hostel in St. Vincent's-square, S.W.1, for King's College (University of London). Mr. A. C. Martin, F.R.I.B.A., architect, 9, New-square, Lincoln's-inn, W.C. Quantity surveyor, Mr. W. S. May, 9, New-square, W.C.:—
Floors—
*Trussed Concrete Steel Co., Ltd., London, S.W.
Lighting—
*Gillham & Jones, London, W.
Heating and Hot Water—
*Marshall & Son, London, E.

Maidstone.—Additions and alterations at the Kent County Ophthalmic Hospital. Messrs. Knapp-Fisher, Powell & Russell, architects, 4a, Lower Belgrave-street, S.W.1:—

Elmore & Son, Maidstone	£15,267 0
G. Browning, Canterbury	15,142 0
R. Corben & Son, Maidstone	14,963 0
Grace & Marsh, Croydon	14,750 0
Norman Smith & Son, Maidstone	14,710 13
R. J. Barwick, Dover	14,500 0
D. Godden & Sons, Ashford	14,222 0
W. W. Martin, Ramsgate	14,168 0
G. E. Wallis & Sons, Maidstone	14,149 0
Bunning & Fitton Adams, Ltd. Godalming	13,587 0
*Cox Bros., Maidstone	13,632 0

Manchester.—Alterations to the edifice for the trustees of the Ebenezer United Methodist Church, Boxton-street and Dorsett-street, Hulme:—
*George MacFarlane & Sons, Ltd., Manchester
Brickwork—
*Alfred Hodkinson, Ltd., Manchester.
Steelwork—
*Edward Wood & Co., Ltd., Manchester
Painters and Plasterers—
*C. Bell (M/C), Ltd., Manchester.
Plumber—
*J. H. Cobb, Manchester.

Manchester.—New hemming factory at Ten Acres Mill, Newton Heath, for Messrs. Tootal, Broadhurst, Lee & Co., Ltd., of Oxford-street, Manchester. Mr. J. H. Sellers, architect, 78, King-street, Manchester:—
Concreting and Brickwork—
*J. Gerrard & Sons, Ltd., Manchester.
Carpenter and Joiner—
*W. Henshaw & Sons, Oldham.
Steelwork—
*John Booth & Sons, Bolton.

Manchester.—Printing works for Messrs. Jesse Broad & Co., Ltd., Buxton-street, London-road, Manchester. Messrs. Broughton Atkinson & Eagle, architects, 37, Brown-street, Manchester:—
*G. & W. Smith, Manchester.
Steelwork—
*C. J. Cooke & Co., Ltd., Manchester.

Manchester.—Block of buildings in Quay-street, for Mr. J. Sunlight, architect, 4, St. Ann's-square, Manchester:—
Excavating, concrete and brickwork—
*Moston Brick and Building Co., Ltd., Manchester.
Steelwork—
*Redpath, Brown & Co., Ltd., Manchester.

Manchester.—Improvements to the "Shepherd Inn," Ridgeway-street, Ancoats, and for sanitary improvements to the "Grey Horse" public house, Ainsworth-street, for Messrs. Chester's Brewery, Ltd., Ardwick Brewery. Messrs. Brameld & Smith, architects, County-buildings, 4, Cannon-street:—
*Thomas Percival, Manchester.

Market Rasen.—Extension of premises for the National Provincial Bank, Ltd. Mr. T. Tatam, architect, Gainsborough:—
*B. Pumfrey, Ltd., Gainsborough ... £2,000

Newport (I.O.W.).—12 non-parlour houses on the Newport Dairy site, for the Corporation:—
‡J. G. Brooker, Freshwater, I.O.W. ... £3,840

Oldham.—Extensions to the ward blocks at In firmary for the B.G. Messrs. Taylor & Simister architects, L. and F.R.I.B.A., 29, Queen-street:—
Excavating, Draining, Concreting and Brickwork—
*Squire, Ashton & Sons, Ltd.
Masonry—
*S. & J. Whitehead.
Carpenter and Joiner—
*Samuel Ashton (Oldham), Ltd.
Slating—
*W. Henshall & Sons, Ltd.
Plastering—
*Edward Pearce.
Plumbing and Glazing—
Edgar Oates, Ltd.
Painting—
*Geo. Whitehead & Sons (Decorators), Ltd.
(All of Oldham.)

Ormskirk.—Installation of electric light and power at Ormskirk Grammar school for the Lancashire E.C. Mr. Stephen Wilkinson, F.R.I.B.A., architect, 16, Ribblesdale-place, Preston:—
T. Francis & Sons, Bolton.

Orpington.—New shops and showrooms in High-street, for Mr. E. Stanger, St. Mary Cray. Messrs. W. Leven and Co., architects, Station Approach:—

Silwood Construction Co.	£3,439
Pearce Bros.	3,425
Treasure Bros.	3,350
A. Gibson	3,249
H. H. Hollingsworth	3,243
Thomas Crossley & Son	3,194
Courtney & Fairbairn, Ltd.	3,123
*Denton Bros.	3,112

Pinner.—2 houses, on West End Farm estate, for the Home Guarantee Corporation, Ltd. Mr. Brian L. Sutcliffe, A.R.I.B.A., architect, 7, Duke-street, Wigmore-street, London, W.1:—
*A. V. Low £2,294

Portmadoc.—Reconstruction work at the hospital, for the Portmadoc Memorial Hospital Committee :—

*Jones & Evans, Pwllheli £5,307

Salford.—Improvements to the Mechanics' Arms, Garden-lane, for Messrs. Groves & Whitnall, Ltd., brewers, Regent-road. Messrs. Brameld & Smith, architects, 4, Cannon-street, Manchester :—

Thomas Percival, Manchester.

Sheffield.—Branch premises on the Longley housing estate, for the Brightside & Carbrook Co-operative Society, Ltd, Attercliffe :—

*Building Dept., B. & C.C.S., Ltd., Sheffield.

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Southport.—Nurses' home for the Board of Management of the Hospital. Mr. Norman Jones, F.R.I.B.A., architect, 329, Lord-street :—

*J. G. Wilkinson, Southport.
Brickwork—
*G. & J. Seddon, Ltd., Little Hulton.

Stapenhill.—22 houses in Short-street, for the Burton-on-Trent Corporation. Mr. George T. Lynam, Borough Engineer and Surveyor :—

W. E. Ward, Alrewas, near Burton-on-Trent	£12,520
F. G. Caulton, Burton-on-Trent	9,872
G. Hodges & Son, Burton-on-Trent	9,065
Worthington & Willson, Burton-on-Trent	8,998
H. Edwards, Ltd., Burton-on-Trent	8,910
G. H. Adams, Burton-on-Trent	8,581
T. Lowe & Sons, Ltd., Burton-on-Trent	8,492
*A. Holmes & Son, Ltd., Burton-on-Trent	8,155
For 6 houses only—	
R. Kershaw & Sons, Burton-on-Trent	2,460

Thackley.—Garage and workshop :—

*Jeptha Thornton & Sons.

Thurnscoe (Yorks).—Sanitary conveniences at 30/44, High-street, and 1 to 11, Togo-buildings, for the U.D.C. :—

*C. Wilson & Sons, Rotherham £171

Tutbury.—Construction of Beech-lane Outfall Sewer, Stretton. Messrs. Wilcox & Raikes, chartered civil engineers, Birmingham :—

Hussey, Egan & Pickmere, Birmingham	£4,709
C. S. Tomlinson, Alfreton	4,500
Peter Lind & Co., Ltd., Westminster	4,315
J. & J. Warner, Mickleover	3,800
Worthington & Willson, Burton-on-Trent	3,697
Geo. Hodges & Son, Burton-on-Trent	3,590
William E. Ward, Burton-on-Trent	3,477
A. H. Price & Co., Nottingham	3,201
W. H. Rogers, Willenhall	2,991
Lewis & Beck, Birmingham	2,964
*G. F. Tomlinson & Sons, Ltd., City-road, Derby	2,521

Twickenham.—Large public garage and petrol service station in Upper Richmond-road :—

Building Work—
*Lester & Co., 47, Parkhurst Road, N.7.
Steelwork—
*Measures Bros. (1911), Ltd., Southwark, S.E.

Worcester.—Rebuilding the "Vine Inn," Droitwich-road, for Messrs. White's Brewery, Winson-road, Birmingham. Mr. Watson Parker, architect, 9, Chesnut-walk, Worcester :—

*G. H. Burbige & Co., Worcester.

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